

Contents of Volume 263

American Journal of Physiology

American Journal of Physiology:
Cell Physiology

American Journal of Physiology:
Endocrinology and Metabolism

American Journal of Physiology:
Gastrointestinal and Liver Physiology

American Journal of Physiology:
Lung Cellular and Molecular Physiology

American Journal of Physiology:
Heart and Circulatory Physiology

American Journal of Physiology:
Regulatory, Integrative and Comparative Physiology

American Journal of Physiology:
Renal, Fluid and Electrolyte Physiology

Advances in Physiology Education

American Journal of Physiology: Cell Physiology

No. 1. JULY 1992

INVITED REVIEW

Inflammatory cytokines within the central nervous system: sources, function,
and mechanism of action

E. N. Benveniste

C1

Metabolic substrates can alter postischemic recovery in preconditioned ischemic heart

T. A. Fralix, C. Steenbergen, R. E. London, and E. Murphy

C17

Interferon- γ is an inducer of plasminogen activator inhibitor type 1
in human orbital fibroblasts

T. J. Smith, A. Ahmed, M. G. Hogg, and P. J. Higgins

C24

Heat shock increases cytosolic free Ca^{2+} concentration via Na^{+} - Ca^{2+} exchange in human
epidermoid A 431 cells

J. G. Kiang, M. L. Koenig, and R. C. Smallridge

C30

Gastric H^{+} - K^{+} -ATPase activity is inhibited by reduction of disulfide bonds in β -subunit

D. C. Chow, C. M. Browning, and J. G. Forte

C39

Ammoniogenesis in LLC-PK₁ cultures: role of transamination

G. Gstraunthaler, F. Landauer, and W. Pfaller

C47

Expression and regulation of the cystic fibrosis gene during rat liver regeneration

R. Tran-Paterson, D. Davin, R. D. Krauss, T. A. Rado, and D. M. Miller

C55

Time course of sodium-induced Na^{+} - K^{+} -ATPase recruitment in rabbit
cortical collecting tubule

N. Coutry, M. Blot-Chabaud, P. Mateo, J. P. Bonvalet, and N. Farman

C61

Carbachol modulates voltage sensitivity of calcium channels in bronchial smooth
muscle of rats

T. Kamishima, M. T. Nelson, and J. B. Patlak

C69

Activation of permeabilized neutrophils: role of anions

S. Grinstein, W. Furuya, and G. P. Downey

C78

Response of slow and fast muscle to hypothyroidism: maximal shortening velocity
and myosin isoforms

V. J. Caiozzo, R. E. Herrick, and K. M. Baldwin

C86

Differences in regulation between nuclear and cytoplasmic Ca^{2+} in cultured
smooth muscle cells

B. Himpens, H. De Smedt, G. Droogmans, and R. Casteels

C95

Contractile agonists activate voltage-dependent calcium channels in airway
smooth muscle cells

M. Tomasic, J. P. Boyle, J. F. Worley, III, and M. I. Kotlikoff

C106

Differential effects of cytokines on long-term mitogenic and secretory responses of fetal
rat pancreatic β -cells

Å. Sjöholm

C114

α -Subunits of G_s and G_i in adipocyte plasma membranes of genetically
diabetic (db/db) mice

N. Bégin-Heick

C121

Protein kinase C affects microfilaments, bone resorption, and $[\text{Ca}^{2+}]_o$ sensing
in cultured osteoclasts

A. Teti, S. Colucci, M. Grano, L. Argentino, and A. Zamboni Zallone

C130

Protein kinase C does not participate in carbachol's secretory action in T84 cells

R. P. Lindeman and H. S. Chase, Jr.

C140

cAMP-dependent protein kinase mediates hydrosmotic effect of vasopressin
in collecting duct

H. M. Snyder, T. D. Noland, and M. D. Breyer

C147

| | |
|--|------|
| Characteristics of membrane currents evoked by photoreleased inositol trisphosphate in <i>Xenopus</i> oocytes <i>I. Parker and I. Ivorra</i> | C154 |
| Effect of forskolin on conductive anion pathways of toad skin <i>W. Nagel and W. Van Driessche</i> | C166 |
| Regulation of an epithelial chloride channel by direct phosphorylation and dephosphorylation <i>A. L. Finn, M. L. Gaido, M. Dillard, and D. L. Brautigan</i> | C172 |
| Altered sulfate transport via anion exchange in CFPAC is corrected by retrovirus-mediated CFTR gene transfer <i>A. Elgavish and E. Meezan</i> | C176 |
| Regulation of apical membrane ion transport in <i>Necturus</i> gallbladder <i>J. L. Garvin and K. R. Spring</i> | C187 |
| Regulated expression of monocyte chemoattractant protein-1 in normal human osteoblastic cells <i>S. R. Williams, Y. Jiang, D. Cochran, G. Dorsam, and D. T. Graves</i> | C194 |
| Sustained activation of PGE ₂ synthesis in mesangial cells cocultured with glomerular endothelial cells <i>K. Uchida and B. J. Ballermann</i> | C200 |
| Cooperative activation of myosin by light chain phosphorylation in permeabilized smooth muscle <i>T. B. Vyas, S. U. Mooers, S. R. Narayan, J. C. Witherell, M. J. Siegman, and T. M. Butler</i> | C210 |
| Citrate transport in proximal cell line <i>D. Law, K. S. Hering-Smith, and L. L. Hamm</i> | C220 |
| Participation of fast-activating, voltage-dependent K currents in electrical slow waves of colonic circular muscle <i>K. D. Thornbury, S. M. Ward, and K. M. Sanders</i> | C226 |
| Outward currents in longitudinal colonic muscle cells contribute to spiking electrical behavior <i>K. D. Thornbury, S. M. Ward, and K. M. Sanders</i> | C237 |
| Activation of Na-H exchange by intracellular lithium in barnacle muscle fibers <i>B. A. Davis, E. M. Hogan, and W. F. Boron</i> | C246 |
| Diverse prostaglandin receptors activate distinct signal transduction pathways in rat myometrium <i>O. Goureau, Z. Tanfin, S. Marc, and S. Harbon</i> | C257 |

| | |
|----------------------|------|
| ANNOUNCEMENTS | C266 |
|----------------------|------|

No. 2. AUGUST 1992

INVITED REVIEW

| | |
|---|------|
| CFTR! <i>C. M. Fuller and D. J. Benos</i> | C267 |
| AMP deaminase binding in contracting rat skeletal muscle <i>K. W. Rundell, P. C. Tullson, and R. L. Terjung</i> | C287 |
| Altered kinetics of AMP deaminase by myosin binding <i>K. W. Rundell, P. C. Tullson, and R. L. Terjung</i> | C294 |
| Changes of cytosolic Ca ²⁺ interfere with measurements of cytosolic Mg ²⁺ using mag-fura-2 <i>T. W. Hurley, M. P. Ryan, and R. W. Brinck</i> | C300 |
| Differential modulation of a sodium conductance in skeletal muscle by intracellular and extracellular fatty acids <i>S. J. Wieland, J. E. Fletcher, and Q.-H. Gong</i> | C308 |

| | |
|---|------|
| Interaction of calcium with plasma membrane of epithelial (MDCK) cells during junction formation <i>R. G. Contreras, J. H. Miller, M. Zamora, L. González-Mariscal, and M. Cereijido</i> | C313 |
| Acceleration of growth of cultured cardiomyocytes and translocation of protein kinase C <i>S. N. Allo, L. L. Carl, and H. E. Morgan</i> | C319 |
| Hypoxia induces glucose transporter expression in endothelial cells <i>J. D. Loike, L. Cao, J. Brett, S. Ogawa, S. C. Silverstein, and D. Stern</i> | C326 |
| ANP-(7-23) stimulates a DHP-sensitive Ca^{2+} conductance and reduces cellular cAMP via a cGMP-independent mechanism <i>C. M. Isales, J. A. Lewicki, J. J. Nee, and P. Q. Barrett</i> | C334 |
| Depletion in nuclear spermine during human spermatogenesis, a natural process of cell differentiation <i>V. Quemener, Y. Blanchard, D. Lescoat, R. Havouis, and J. P. Moulinoux</i> | C343 |
| Chloride secretory response to extracellular ATP in human normal and cystic fibrosis nasal epithelia <i>L. L. Clarke and R. C. Boucher</i> | C348 |
| Two-dimensional ^{31}P -chemical shift imaging of intramuscular heterogeneity in exercising human forearm muscle <i>J. A. L. Jeneson, S. J. Nelson, D. B. Vigneron, J. S. Taylor, J. Murphy-Boesch, and T. R. Brown</i> | C357 |
| Amphibian ryanodine receptor isoforms are related to those of mammalian skeletal or cardiac muscle <i>F. A. Lai, Q.-Y. Liu, L. Xu, A. El-Hashem, N. R. Kramarcy, R. Sealock, and G. Meissner</i> | C365 |
| Gap junction-mediated intercellular diffusion of Ca^{2+} in cultured human corporal smooth muscle cells <i>G. J. Christ, A. P. Moreno, A. Melman, and D. C. Spray</i> | C373 |
| Early effects of aldosterone on apical and basolateral membrane conductances of TBM cells <i>J.-D. Horisberger</i> | C384 |
| Physiological fluid shear stress causes downregulation of endothelin-1 mRNA in bovine aortic endothelium <i>A. Malek and S. Izumo</i> | C389 |
| Oncotic pressure regulates gene transcriptions of albumin and apolipoprotein B in cultured rat hepatoma cells <i>A. Yamauchi, Y. Fukuhara, S. Yamamoto, F. Yano, M. Takenaka, E. Imai, T. Noguchi, T. Tanaka, T. Kamada, and N. Ueda</i> | C397 |
| Protective effect of the dimer of 16,16-diMePGB ₁ against KCN-induced mitochondrial failure in hepatocytes <i>Y. Park, T. M. Devlin, and D. P. Jones</i> | C405 |
| Volume regulation during recovery from chronic hypertonicity in brain glial cells <i>K. Strange and R. Morrison</i> | C412 |
| TGF- β_1 potentiates growth factor-stimulated proliferation of vascular smooth muscle cells in genetic hypertension <i>J. Saltis, A. Agrotis, and A. Bobik</i> | C420 |
| 5'-Aminolevulinic synthase activity is decreased in skeletal muscle of anemic rats <i>L. A. McNabney and D. A. Essig</i> | C429 |
| Low K^+ increases Na^+ - K^+ -ATPase α - and β -subunit mRNA and protein abundance in cultured renal proximal tubule cells <i>M.-J. Tang and A. A. McDonough</i> | C436 |
| Abundance, localization, and insulin-induced translocation of glucose transporters in red and white muscle <i>A. Marette, J. M. Richardson, T. Ramlal, T. W. Balon, M. Vranic, J. E. Pessin, and A. Klip</i> | C443 |
| Maturation changes in respiratory control through creatine kinase in heart in vivo <i>M. A. Portman and X.-H. Ning</i> | C453 |

| | |
|--|------|
| Nitrovasodilators relax arterial smooth muscle by decreasing $[Ca^{2+}]_i$ and uncoupling stress from myosin phosphorylation <i>N. L. McDaniel, X.-L. Chen, H. A. Singer, R. A. Murphy, and C. M. Rembold</i> | C461 |
| Cyclic nucleotide-dependent regulation of Mn^{2+} influx, $[Ca^{2+}]_i$, and arterial smooth muscle relaxation <i>X.-L. Chen and C. M. Rembold</i> | C468 |
| Insulin-like growth factors decrease oxygen-regulated erythropoietin production by human hepatoma cells (Hep G2) <i>H. Scholz, W. Baier, P. Ratcliffe, K. Eckardt, J. Zapf, A. Kurtz, and C. Bauer</i> | C474 |
| Transmucosal impedance of small intestine: correlation with transport of sugars and amino acids <i>J. R. Pappenheimer and K. Volpp</i> | C480 |
| Arachidonic acid and lipoxygenase metabolites uncouple neonatal rat cardiac myocyte pairs <i>K. D. Massey, B. N. Minnich, and J. M. Burt</i> | C494 |
| Characterization of adenosine A_1 receptor in a cell line (28A) derived from rabbit collecting tubule <i>W. S. Spielman, K.-N. Klotz, L. J. Arend, B. A. Olson, D. G. LeVier, and U. Schwabe</i> | C502 |
| Na^+ alters the affinity for glucose and phosphate in rat renal brush-border membranes: a study of NMR relaxation rates <i>M. Barac-Nieto, S. M. Liu, and R. K. Gupta</i> | C509 |
| Cystine dimethyl ester reduces the forces driving sodium-dependent transport in LLC-PK ₁ cells <i>A. Ben-Nun, N. Bashan, R. Potashnik, R. Cohen-Luria, and A. Moran</i> | C516 |

SPECIAL COMMUNICATIONS

| | |
|---|------|
| Conditional immortalization of bicarbonate-secreting intercalated cells from rabbit <i>J. C. Edwards, J. van Adelsberg, M. Rater, D. Herzlinger, J. Lebowitz, and Q. Al-Awqati</i> | C521 |
| Right-angle light scattering to assay basal and regulated plasma membrane Cl^- conductances <i>S. Dho, S. Chou, X.-B. Chang, J. M. Rommens, and J. K. Foskett</i> | C530 |

RAPID COMMUNICATIONS

| | |
|---|------|
| Stored calcium modulates inositol phosphate synthesis in cultured smooth muscle cells <i>D. M. Berman and W. F. Goldman</i> | C535 |
| Transient myosin phosphorylation at constant Ca^{2+} during agonist activation of permeabilized arteries <i>S. Moreland, J. Nishimura, C. van Breemen, H. Y. Ahn, and R. S. Moreland</i> | C540 |
| Immunofluorescence localization of the Na-Ca exchanger in heart cells <i>R. S. Kieval, R. J. Bloch, G. E. Lindenmayer, A. Ambesi, and W. J. Lederer</i> | C545 |

No. 3. SEPTEMBER 1992

INVITED REVIEW

| | |
|---|------|
| Fetuin: its enigmatic property of growth promotion <i>Z. Nie</i> | C551 |
| Regulation by calcitonin of $Na^+-K^+-Cl^-$ cotransport in a rabbit thick ascending limb cell line <i>T. Vuillemin, J. Teulon, M. Geniteau-Legendre, B. Baudouin, S. Estrade, R. Cassingena, P. Ronco, and A. Vandewalle</i> | C563 |

| | |
|--|------|
| Comparison of apical and basal surfaces of confluent endothelial cells: patch-clamp and viral studies <i>M. Colden-Stanfield, E. B. Cramer, and E. K. Gallin</i> | C573 |
| Volume-sensitive Ca influx and release from intracellular pools in gastric parietal cells <i>P. A. Negulescu, B. Munck, and T. E. Machen</i> | C584 |
| The iodide channel of the thyroid: a plasma membrane vesicle study <i>P. Golstein, M. Abramow, J. E. Dumont, and R. Beauwens</i> | C590 |
| Regulation of oxygen consumption in fast- and slow-twitch muscle <i>M. J. Kushmerick, R. A. Meyer, and T. R. Brown</i> | C598 |
| Stimulation of intestinal Cl ⁻ transport by heat-stable enterotoxin: activation of cAMP-dependent protein kinase by cGMP <i>L. R. Forte, P. K. Thorne, S. L. Eber, W. J. Krause, R. H. Freeman, S. H. Francis, and J. D. Corbin</i> | C607 |
| Evidence for the involvement of a K ⁺ channel in isosmotic cell shrinking in vestibular dark cells <i>P. Wangemann, N. Shiga, C. Welch, and D. C. Marcus</i> | C616 |
| β_2 -Adrenoceptor density in fibroblast culture correlates with human NaCl sensitivity <i>P. Kotanko, O. Höglinger, and F. Skrabal</i> | C623 |
| Ca ²⁺ influx via Na ⁺ -Ca ²⁺ exchange in immortalized aortic myocytes. I. Dependence on [Na ⁺] _i and inhibition by external Na ⁺ <i>R.-M. Lyu, L. Smith, and J. B. Smith</i> | C628 |
| Ca ²⁺ influx via Na ⁺ -Ca ²⁺ exchange in immortalized aortic myocytes. II. Feedback inhibition by [Ca ²⁺] _i <i>R.-M. Lyu, L. Smith, and J. B. Smith</i> | C635 |
| Contractile arrest accelerates myosin heavy chain degradation in neonatal rat heart cells <i>A. M. Samarel, M. L. Spragia, V. Maloney, S. A. Kamal, and G. L. Engelmann</i> | C642 |
| Effects of fat availability on acetyl-CoA and acetylcarnitine metabolism in rat skeletal muscle <i>L. L. Spriet, D. J. Dyck, G. Cederblad, and E. Hultman</i> | C653 |
| Protein kinase A phosphorylation enhances sodium channel currents in <i>Xenopus</i> oocytes <i>R. D. Smith and A. L. Goldin</i> | C660 |
| Evidence for an InsP ₃ -gated channel protein in isolated rat olfactory cilia <i>D. Restrepo, J. H. Teeter, E. Honda, A. G. Boyle, J. F. Marecek, G. D. Prestwich, and D. L. Kalinoski</i> | C667 |
| Volume-sensitive basolateral K ⁺ channels in HT-29/B6 cells: block by lidocaine, quinidine, NPPB, and Ba ²⁺ <i>B. Illek, H. Fischer, K.-M. Kreusel, U. Hegel, and W. Clauss</i> | C674 |
| Phospholipid metabolism and intracellular Ca ²⁺ homeostasis in cultured rat hepatocytes intoxicated with cyanide <i>I. Sakaida, A. P. Thomas, and J. L. Farber</i> | C684 |
| Ionic basis for spontaneous depolarizations in isolated smooth muscle cells of canine colon <i>J. M. Post and J. R. Hume</i> | C691 |

SPECIAL COMMUNICATION

| | |
|--|------|
| A novel remote-sensing isometric force transducer for micromechanics studies <i>W. H. Guilford and R. W. Gore</i> | C700 |
|--|------|

RAPID COMMUNICATIONS

| | |
|---|------|
| Small linear chloride channels are endogenous to nonepithelial cells <i>S. E. Gabriel, E. M. Price, R. C. Boucher, and M. J. Stutts</i> | C708 |
| Ca ²⁺ -independent isoforms of protein kinase C differentially translocate in smooth muscle <i>R. A. Khalil, C. Lajoie, M. S. Resnick, and K. G. Morgan</i> | C714 |

BOWDITCH LECTURE

| | |
|---|------|
| Introduction | C721 |
| Intracellular signal transduction in four dimensions: from molecular design to physiology <i>R. Y. Tsien</i> | C723 |
| <hr/> | |
| Functional localization of adenosine receptor-mediated pathways in the LLC-PK ₁ renal cell line <i>D. G. LeVier, D. E. McCoy, and W. S. Spielman</i> | C729 |
| Substance P induces whole cell current transients in RBL-2H3 cells <i>J. Janiszewski, J. Bienenstock, and M. G. Blennerhassett</i> | C736 |
| Converting-enzyme inhibitors increase converting-enzyme mRNA and activity in endothelial cells <i>S. J. King and S. Oparil</i> | C743 |
| Effects of angiotensin II and nonpeptide receptor antagonists on transduction pathways in rat proximal tubule <i>J. Poggioli, G. Lazar, P. Houillier, J. P. Gardin, J. M. Achard, and M. Paillard</i> | C750 |
| Regulation of apical Cl ⁻ conductance and basolateral K ⁺ conductances by phorbol esters in HT-29cl.19A cells <i>R. B. Bajnath, M. H. van Hoeve, H. R. de Jonge, and J. A. Groot</i> | C759 |
| Induction of ICAM-1 by TNF- α , IL-1 β , and LPS in human endothelial cells after downregulation of PKC <i>C. L. Myers, S. J. Wertheimer, J. Schembri-King, T. Parks, and R. W. Wallace</i> | C767 |
| Novel bumetanide-sensitive K ⁺ transport in preimplantation mouse conceptuses <i>L. J. Van Winkle and A. L. Campione</i> | C773 |
| Carbachol induces K ⁺ , Cl ⁻ , and nonselective cation conductances in T84 cells: a perforated patch-clamp study <i>D. C. Devor and M. E. Duffey</i> | C780 |
| Effect of thyroid status on the expression of metabolic enzymes during chronic stimulation <i>D. A. Hood, J.-A. Simoneau, A. M. Kelly, and D. Pette</i> | C788 |
| Increase of apamin receptors in skeletal muscle induced by colchicine: possible role in myotonia <i>M. I. Behrens and C. Vergara</i> | C794 |
| Muscle fatigue in the frog semitendinosus: role of the high-energy phosphates and P _i <i>L. V. Thompson and R. H. Fitts</i> | C803 |
| Adrenalectomy reduces α_1 and not β_1 Na ⁺ -K ⁺ -ATPase mRNA expression in rat distal nephron <i>N. Farman, N. Coutry, N. Logvinenko, M. Blot-Chabaud, R. Bourbouze, and J. P. Bonvalet</i> | C810 |
| Permeation and inactivation by calcium and manganese of bovine adrenal chromaffin cell calcium channels <i>R. I. Fonteriz, J. Garcia-Sancho, L. Gandia, M. G. Lopez, and A. G. Garcia</i> | C818 |
| Aldosterone alters the open probability of amiloride-blockable sodium channels in A6 epithelia <i>A. E. Kemendy, T. R. Kleyman, and D. C. Eaton</i> | C825 |
| Intracardiac detection of angiotensinogen and renin: a localized renin-angiotensin system in neonatal rat heart <i>D. E. Dostal, K. N. Rothblum, M. I. Chernin, G. R. Cooper, and K. M. Baker</i> | C838 |
| Detection of angiotensin I and II in cultured rat cardiac myocytes and fibroblasts <i>D. E. Dostal, K. N. Rothblum, K. M. Conrad, G. R. Cooper, and K. M. Baker</i> | C851 |
| Differential megakaryocytic desensitization to platelet agonists <i>G. W. Dorn, II and M. G. Davis</i> | C864 |

| | |
|--|------|
| Cellular mechanisms of vasopressin and endothelin to mobilize $[Mg^{2+}]_i$ in vascular smooth muscle cells | |
| <i>K. Okada, S. Ishikawa, and T. Saito</i> | C873 |
| Isolation of a chloride channel-enriched membrane fraction from tracheal and renal epithelia | |
| <i>C. L. Preston, M. A. Calenzo, and W. P. Dubinsky</i> | C879 |
| Immunolocalization of chloride-transporting membrane vesicles in tracheal epithelial cells | |
| <i>W. P. Dubinsky, C. L. Preston, M. A. Calenzo, G. J. White, and E. R. Decker</i> | C888 |
| Lysophosphatidic acid induces a pertussis toxin-sensitive Ca^{2+} -activated Cl^- current in <i>Xenopus laevis</i> oocytes | |
| <i>M. E. Durieux, M. N. Salafranca, K. R. Lynch, and J. R. Moorman</i> | C896 |
| Organic osmolytes increase cytoplasmic viscosity in kidney cells | |
| <i>N. Periasamy, H. P. Kao, K. Fushimi, and A. S. Verkman</i> | C901 |

RAPID COMMUNICATIONS

| | |
|---|------|
| Vasopressin decreases immunogold labeling of apical actin in the toad bladder granular cell | |
| <i>Y. Gao, N. Franki, F. Macaluso, and R. M. Hays</i> | C908 |
| A plasma membrane proton ATPase in specialized cells of rat epididymis | |
| <i>D. Brown, B. Lui, S. Gluck, and I. Sabolić</i> | C913 |

No. 5. NOVEMBER 1992

INVITED REVIEW

| | |
|---|-------|
| Erythrocyte K-Cl cotransport: properties and regulation | |
| <i>P. K. Lauf, J. Bauer, N. C. Adragna, H. Fujise, A. M. M. Zade-Oppen, K. H. Ryu, and E. Delpire</i> | C917 |
| Ca^{2+} mobilization by extracellular ATP in rat cardiac myocytes: regulation by protein kinase C and A | |
| <i>J.-S. Zheng, A. Christie, M. N. Levy, and A. Scarpa</i> | C933 |
| Acute variations in extracellular pH modulate transduction pathways of PTH in rat proximal tubule | |
| <i>J. Poggioli, G. Lazar, P. Houillier, J. P. Gardin, and M. Paillard</i> | C941 |
| Single calcium channel currents of arterial smooth muscle at physiological calcium concentrations | |
| <i>M. Gollasch, J. Hescheler, J. M. Quayle, J. B. Patlak, and M. T. Nelson</i> | C948 |
| Potential of twitch contraction in guinea pig ureter by sodium vanadate | |
| <i>S. Sunano, K. Moriyama, and K. Shimamura</i> | C953 |
| Differences in gap junction channels between cardiac myocytes, fibroblasts, and heterologous pairs | |
| <i>M. B. Rook, A. C. G. van Ginneken, B. de Jonge, A. El Aoumari, D. Gros, and H. J. Jongsma</i> | C959 |
| Kinetics of nucleocytoplasmic Ca^{2+} transients in DDT ₁ MF-2 smooth muscle cells | |
| <i>B. Himpens, H. De Smedt, and R. Casteels</i> | C978 |
| Membrane currents in a calcitonin-secreting human C cell line | |
| <i>B. A. Biagi, B. Mlinar, and J. J. Enyeart</i> | C986 |
| Effect of cytochalasin D on the actin cytoskeleton of the toad bladder epithelial cell | |
| <i>N. Franki, G. Ding, Y. Gao, and R. M. Hays</i> | C995 |
| C-type natriuretic peptide inhibits growth factor-dependent DNA synthesis in smooth muscle cells | |
| <i>J. G. Porter, R. Catalano, G. McEnroe, J. A. Lewicki, and A. A. Protter</i> | C1001 |
| Rat kidney Na-K pumps incorporated into low K^+ sheep red blood cell membranes are stimulated by anti- L_p antibody | |
| <i>Z.-C. Xu, P. B. Dunham, J. S. Munzer, J. R. Silvius, and R. Blostein</i> | C1007 |

| | |
|---|-------|
| β -Adrenergic inhibition of Na-K-Cl cotransport in lymphocytes <i>R. D. Feldman</i> | C1015 |
| Association of phospholipase C- δ with a highly enriched preparation of canine sarcolemma <i>R. A. Wolf</i> | C1021 |
| Calcium signaling in endothelia: cellular heterogeneity and receptor internalization <i>W. H. Weintraub, P. A. Negulescu, and T. E. Machen</i> | C1029 |
| Extracellular nucleotides elevate $[Ca^{2+}]_i$ in rat osteoblastic cells by interaction with two receptor subtypes <i>W. J. Reimer and S. J. Dixon</i> | C1040 |
| Ca^{2+} -activated K^+ channels in pregnant rat myometrium: modulation by a β -adrenergic agent <i>K. Anwer, L. Toro, C. Oberti, E. Stefani, and B. M. Sanborn</i> | C1049 |
| Oxygenation-activated K fluxes in trout red blood cells <i>O. B. Nielsen, G. Lykkeboe, and A. R. Cossins</i> | C1057 |
| Effect of fatigue on rate of isometric force development in mouse fast- and slow-twitch muscles <i>C. J. Barclay</i> | C1065 |
| Effects of intracellular ions on interleukin- 1β production by lipopolysaccharide-activated human monocytes <i>U. Orlinska and R. C. Newton</i> | C1073 |
| Chemical modification of Ca^{2+} -activated potassium channels of GH $_3$ anterior pituitary cells <i>A. M. Frace and D. C. Eaton</i> | C1081 |
| Delayed shortening and shrinkage of cochlear outer hair cells <i>S. Ohnishi, M. Hara, M. Inoue, T. Yamashita, T. Kumazawa, A. Minato, and C. Inagaki</i> | C1088 |
| α -Adrenergic stimulation of Na-H exchange in cardiac myocytes <i>M. A. Wallert and O. Fröhlich</i> | C1096 |
| Interaction of TPA and ultraviolet B radiation in regulation of ODC gene expression in rat keratinocytes <i>C. F. Rosen, D. Gajic, Q. Jia, and D. J. Drucker</i> | C1103 |

RAPID COMMUNICATION

| | |
|---|-------|
| Single-channel behavior of a purified epithelial Na^+ channel subunit that binds amiloride <i>S. Sariban-Sohraby, M. Abramow, and R. S. Fisher</i> | C1111 |
|---|-------|

No. 6. DECEMBER 1992

INVITED REVIEW

| | |
|---|-------|
| Signal transduction by T-cell receptors: mobilization of Ca and regulation of Ca-dependent effector molecules <i>B. A. Premack and P. Gardner</i> | C1119 |
| Modulation of Na-H exchange activity by angiotensin II in opossum kidney cells <i>M. Jourdain, C. Amiel, and G. Friedlander</i> | C1141 |
| Antisense oligonucleotides to CFTR confer a cystic fibrosis phenotype on B lymphocytes <i>R. D. Krauss, G. Berta, T. A. Rado, and J. K. Bubien</i> | C1147 |
| Characterization of cultured chemoreceptor cells dissociated from adult rabbit carotid body <i>M. T. Pérez-García, A. Obeso, J. R. López-López, B. Herreros, and C. González</i> | C1152 |
| Negative-feedback regulation of excitation-contraction coupling in gastric smooth muscle <i>H. Ozaki, L. Zhang, I. L. O. Buxton, K. M. Sanders, and N. G. Publicover</i> | C1160 |
| Effects of okadaic acid indicate a role for dephosphorylation in pancreatic stimulus-secretion coupling <i>A. C. C. Wagner, M. J. Wishart, D. I. Yule, and J. A. Williams</i> | C1172 |

| | |
|--|-------|
| Loss of suppression of GSH synthesis at low cell density in primary cultures of rat hepatocytes <i>S. C. Lu and J.-L. Ge</i> | C1181 |
| Histamine-induced Cl^- secretion in human nasal epithelium: responses of apical and basolateral membranes <i>L. L. Clarke, A. M. Paradiso, and R. C. Boucher</i> | C1190 |
| Anion channels for amino acids in MDCK cells <i>U. Banderali and G. Roy</i> | C1200 |
| PGE_2 regulates cAMP production in cultured rabbit CCD cells: evidence for dual inhibitory mechanisms <i>T. D. Noland, C. E. Carter, H. R. Jacobson, and M. D. Breyer</i> | C1208 |
| Calcium-activated phosphatidylcholine-specific phospholipase C and D in MDCK epithelial cells <i>M. W. Peterson and M. E. Walter</i> | C1216 |
| Localization of the CHIP28 water channel in rat kidney <i>I. Sabolić, G. Valenti, J.-M. Verbavatz, A. N. Van Hoek, A. S. Verkman, D. A. Ausiello, and D. Brown</i> | C1225 |
| Na channel kinetics remain stable during perforated-patch recordings <i>D. J. Wendt, C. F. Starmer, and A. O. Grant</i> | C1234 |
| Expression of the Na-Ca exchanger in diverse tissues: a study using the cloned human cardiac Na-Ca exchanger <i>P. Kofuji, R. W. Hadley, R. S. Kieval, W. J. Lederer, and D. H. Schulze</i> | C1241 |
| Transport of choline by plasma membrane vesicles from lung-derived epithelial cells <i>A. B. Fisher, C. Dodia, A. Chander, and A. Kleinzeller</i> | C1250 |
| Ca^{2+} sensitivity of contractile activation during muscarinic stimulation of tracheal muscle <i>S. J. Gunst, W. T. Gerthoffer, and M. H. Al-Hassani</i> | C1258 |
| Regulation of pH_i in Saos-2 cells by thrombin: roles of proteolytic activity and cytosolic calcium transients <i>E. Ofori-Darko and A. H. Tashjian, Jr.</i> | C1266 |
| Role for diacylglycerol in mediating the actions of ACh on M-current in gastric smooth muscle cells <i>L. H. Clapp, S. M. Sims, J. J. Singer, and J. V. Walsh, Jr.</i> | C1274 |
| Osmoregulation of Na^+ -inositol cotransporter activity and mRNA levels in brain glial cells <i>A. Paredes, M. McManus, H. M. Kwon, and K. Strange</i> | C1282 |
| Muscarinic receptors in MDCK cells are coupled to multiple messenger systems <i>D. Mohuczy-Dominiak and L. C. Garg</i> | C1289 |
| Endothelin-1 stimulates DNA synthesis and proliferation of pulmonary artery smooth muscle cells <i>K. Janakidevi, M. A. Fisher, P. J. Del Vecchio, C. Tiruppathi, J. Figge, and A. B. Malik</i> | C1295 |

SPECIAL COMMUNICATION

| | |
|---|-------|
| Simultaneous fluorescence measurement of calcium and membrane potential responses to endothelin <i>S. G. Kremer, W. Zeng, and K. L. Skorecki</i> | C1302 |
|---|-------|

RAPID COMMUNICATION

| | |
|---|-------|
| Fish antifreeze proteins block Ca entry into rabbit parietal cells <i>P. A. Negulescu, B. Rubinsky, G. L. Fletcher, and T. E. Machen</i> | C1310 |
|---|-------|

| | |
|-----------------------------------|-------|
| <i>Subject Index to Volume 32</i> | C1315 |
| <i>Author Index to Volume 32</i> | C1325 |

CORRIGENDA

Volume 262, May 1992

Volume 31, May 1992

Pages C1181-C1188: A. Miyamoto, R. Villalobos-Molina, M. A. Kowatch, and G. S. Roth. "Altered coupling of α_1 -adrenergic receptor-G protein in rat parotid during aging." Figure 5 should have appeared as follows:

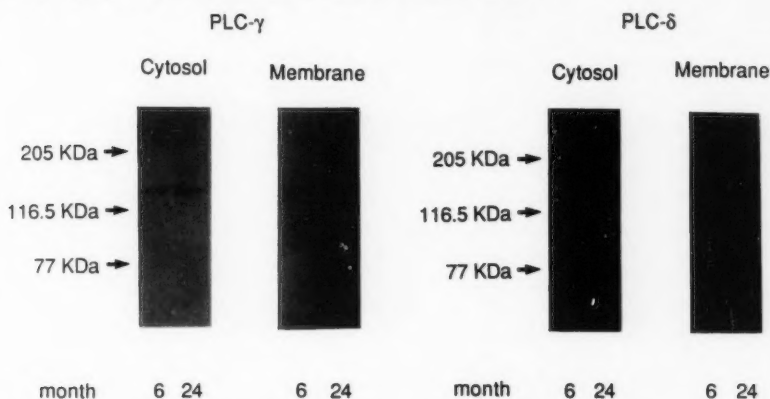


Fig. 5. Immunoblots of phosphoinositide-specific phospholipase C (PLC)- γ and PLC- δ derived from adult and old parotid cytosol and membrane preparations. Parotid cytosols and membranes from adult and old rats were subjected to SDS-PAGE followed by PLC immunoblotting using rabbit antisera and goat anti-rabbit IgG (see MATERIALS AND METHODS). Each lane contained 300 μ g protein from parotid cytosol and membranes of adult and old rats. Immunolabeled PLC- γ and PLC- δ bands were identified by densitometry. The areas (A_{Umm}) for 8 adult and 8 old cytosol were as follows: PLC- γ , 0.12 ± 0.01 and 0.10 ± 0.01 , respectively, $P < 0.37$; and PLC- δ , 0.05 ± 0.00 and 0.06 ± 0.01 , respectively, $P < 0.09$. The areas (A_{Umm}) for 8 adult and 8 old membranes were as follows: PLC- γ , 0.09 ± 0.01 and 0.09 ± 0.00 , respectively, $P < 0.86$; and PLC- δ , no peak found.

American Journal of Physiology: Endocrinology and Metabolism

No. 1. JULY 1992

| | |
|--|------|
| Glucose utilization and insulin action in adult rats submitted to prolonged food restriction <i>F. Escrivá, C. Rodríguez, J. Cacho, C. Alvarez, B. Portha, and A. M. Pascual-Leone</i> | E1 |
| Corelease of galanin and NE from pancreatic sympathetic nerves during severe hypoglycemia in dogs <i>P. J. Havel, T. O. Mundinger, R. C. Veith, B. E. Dunning, and G. J. Taborsky, Jr.</i> | E8 |
| Use of [3- ³ H]glucose and [6- ¹⁴ C]glucose to measure glucose turnover and glucose metabolism in humans <i>H. Katz, M. Homan, P. Butler, and R. Rizza</i> | E17 |
| Free and sulfoconjugated catecholamine responses at birth in newborn sheep <i>K. Oyama, J. Padbury, A. Martinez, B. Chappell, H. Stein, L. Blount, and E. Buhl</i> | E23 |
| Dose-response characteristics of human proinsulin and insulin in non-insulin-dependent diabetic humans <i>S. N. Davis, L. Monti, P. M. Piatti, M. Brown, C. Hetherington, H. Ørskov, W. Sobey, C. N. Hales, and K. G. M. M. Alberti</i> | E28 |
| Use of ¹⁴ CO ₂ in estimating rates of hepatic gluconeogenesis <i>E. Esenmo, V. Chandramouli, W. C. Schumann, K. Kumaran, J. Wahren, and B. R. Landau</i> | E36 |
| Mechanism of delayed hepatic glycogen synthesis after an oral galactose load vs. an oral glucose load in adult rats <i>C. B. Niewoehner and B. Neil</i> | E42 |
| Anabolic effects of clenbuterol on skeletal muscle are mediated by β ₂ -adrenoceptor activation <i>J. J. Choo, M. A. Horan, R. A. Little, and N. J. Rothwell</i> | E50 |
| Alloxan, but not streptozotocin, increases blood perfusion of pancreatic islets in rats <i>L. Jansson and S. Sandler</i> | E57 |
| Comparison of indirect calorimetry and a new breath ¹³ C/ ¹² C ratio method during strenuous exercise <i>J. A. Romijn, E. F. Coyle, J. Hibbert, and R. R. Wolfe</i> | E64 |
| Adrenergic and nonadrenergic cotransmitters inhibit insulin secretion during sympathetic stimulation in dogs <i>J. Lorrain, I. Angel, N. Duval, M. T. Eon, A. Oblin, and S. Z. Langer</i> | E72 |
| Effect of insulin on oxidative and nonoxidative pathways of free fatty acid metabolism in human obesity <i>L. C. Groop, R. C. Bonadonna, D. C. Simonson, A. S. Petrides, M. Shank, and R. A. DeFronzo</i> | E79 |
| Multiple cold air exposures change oral triiodothyronine kinetics in normal men <i>H. L. Reed, M. M. D'Alessandro, K. R. Kowalski, and L. D. Homer</i> | E85 |
| Effects of fish and safflower oil feeding on subcellular glucose transporter distributions in rat adipocytes <i>O. Ezaki, E. Tsuji, K. Momomura, M. Kasuga, and H. Itakura</i> | E94 |
| Developmental expression of insulin-regulatable glucose transporter GLUT-4 <i>D. R. Studelska, C. Campbell, S. Pang, K. J. Rodnick, and D. E. James</i> | E102 |
| Osteocalcin and its message: relationship to bone histology in magnesium-deprived rats <i>T. O. Carpenter, S. J. Mackowiak, N. Troiano, and C. M. Gundberg</i> | E107 |
| Decreased T ₄ -to-T ₃ conversion in brown adipose tissue of Zucker fa/fa pups before the onset of obesity <i>V. Marie, F. Dupuy, and R. Bazin</i> | E115 |

| | |
|---|------|
| Relationship between aerobic fitness level and daily energy expenditure in weight-stable humans <i>T. A. Sharp, G. W. Reed, M. Sun, N. N. Abumrad, and J. O. Hill</i> | E121 |
| Thermogenic and hormonal responses to amino acid infusion in septic humans <i>J. Arnold, D. Leinhardt, G. Carlson, P. Gray, R. A. Little, and M. H. Irving</i> | E129 |
| Prednisone-induced osteopenia in beagles: variable effects mediated by differential suppression of bone formation <i>L. D. Quarles</i> | E136 |
| Epidermal growth factor prohormone is secreted in human urine <i>J. Lakshmanan, E. C. Salido, R. Lam, and D. A. Fisher</i> | E142 |
| Erectile and copulatory dysfunction in chronically diabetic BB/WOR rats <i>F. T. Murray, R. D. Johnson, M. Sciadini, M. J. Katovich, J. Rountree, and H. Jewett</i> | E151 |
| Endothelin in rabbit uterus during pregnancy <i>A. Peri, G. B. Vannelli, G. Fantoni, S. Giannini, T. Barni, C. Orlando, M. Serio, and M. Maggi</i> | E158 |
| Role of GH in regulating nocturnal rates of lipolysis and plasma mevalonate levels in normal and diabetic humans <i>P. J. Boyle, A. Avogaro, L. Smith, D. M. Bier, A. S. Pappu, D. R. Illingworth, and P. E. Cryer</i> | E168 |
| Plasma leucine kinetics and urinary nitrogen excretion in intensively treated diabetes mellitus <i>F. Larièvre, D. B. Kupranycz, J.-L. Chiasson, and L. J. Hoffer</i> | E173 |

No. 2. AUGUST 1992

EDITORIAL REVIEW

| | |
|--|------|
| Atrial natriuretic peptide-induced inhibition of aldosterone secretion: a quest for mediator(s) <i>A. Ganguly</i> | E181 |
| <hr/> | |
| Regulation of acute parathyroid hormone release in normal humans: combined calcium and citrate clamp study <i>P. Schwarz, H. A. Sørensen, I. Transbøl, and P. McNair</i> | E195 |
| Effects of epinephrine on insulin-mediated glucose uptake in whole body and leg muscle in humans: role of blood flow <i>M. Laakso, S. V. Edelman, G. Brechtel, and A. D. Baron</i> | E199 |
| PDGF induces tyrosine phosphorylation in osteoblast-like cells: relevance to mitogenesis <i>G. Davidai, A. Lee, I. Schwartz, and E. Hazum</i> | E205 |
| Dehydroepiandrosterone prevents dexamethasone-induced hypertension in rats <i>Y. Shafagoj, J. Opoku, D. Qureshi, W. Regelson, and M. Kalimi</i> | E210 |
| Leucine kinetics in fed low-birth-weight infants: importance of splanchnic tissues <i>B. Beaufrère, V. Fournier, B. Salle, and G. Putet</i> | E214 |
| Enhanced degradation of collagen within apical vs. basal wall of ovulatory ovine follicle <i>W. J. Murdoch and R. J. McCormick</i> | E221 |
| Electrical pacing induces adenylyl cyclase in skeletal muscle independent of the β -adrenergic receptor <i>W. E. Kraus, J. P. Longabaugh, and S. B. Liggett</i> | E226 |
| Spatial and temporal thyrocyte response to TSH: a computer-assisted image analysis <i>C. Penel and J. Mauchamp</i> | E231 |
| Stretch-dependent regulation of atrial peptide synthesis and secretion in cultured atrial cardiocytes <i>D. G. Gardner, H. Wirtz, and L. G. Dobbs</i> | E239 |
| Platelet catecholamine contents as related to trait anxiety and aerobic fitness <i>I. van Faassen, C. Popp-Snijders, J. J. P. Nauta, G. A. van Zijderveld, L. J. P. van Doornen, and F. J. H. Tilders</i> | E245 |

| | |
|--|------|
| Epinephrine's ketogenic effect in humans is mediated principally by lipolysis <i>A. Avogaro, P. E. Cryer, and D. M. Bier</i> | E250 |
| Forearm ketone body metabolism in normal and in insulin-dependent diabetic patients <i>A. Avogaro, A. Doria, L. Gnudi, A. Carraro, E. Duner, E. Brocco, A. Tiengo, G. Crepaldi, D. M. Bier, and R. Nosadini</i> | E261 |
| Origin and disposal of 1,5-anhydroglucitol, a major polyol in the human body <i>T. Yamanouchi, Y. Tachibana, H. Akanuma, S. Minoda, T. Shinohara, H. Moromizato, H. Miyashita, and I. Akaoka</i> | E268 |
| Amylin and insulin in rat soleus muscle: dose responses for cosecreted noncompetitive antagonists <i>A. A. Young, B. Gedulin, D. Wolfe-Lopez, H. E. Greene, T. J. Rink, and G. J. S. Cooper</i> | E274 |
| Trophic action of local intraileal infusion of insulin-like growth factor I: polyamine dependence <i>H. Olanrewaju, L. Patel, and E. R. Seidel</i> | E282 |
| Is there a role for the adrenals in the development of hypercholesterolemia in Zucker fatty rats? <i>F. Alarrayed, A. D. Hartman, and J. R. Porter</i> | E287 |
| Spontaneous physical activity and obesity: cross-sectional and longitudinal studies in Pima Indians <i>F. Zurlo, R. T. Ferraro, A. M. Fontvieille, R. Rising, C. Bogardus, and E. Ravussin</i> | E296 |
| Differential effects of interleukin-1 and tumor necrosis factor on ketogenesis <i>R. A. Memon, K. R. Feingold, A. H. Moser, W. Doerrler, S. Adi, C. A. Dinarello, and C. Grunfeld</i> | E301 |
| Selective reduction of creatine kinase subunit mRNAs in striated muscle of diabetic rats <i>C.-Y. Su, M. Payne, A. W. Strauss, and W. H. Dillmann</i> | E310 |
| Suppression of muscle protein turnover and amino acid degradation by dietary protein deficiency <i>N. E. Tawa, Jr. and A. L. Goldberg</i> | E317 |
| Dietary protein deficiency reduces lysosomal and nonlysosomal ATP-dependent proteolysis in muscle <i>N. E. Tawa, Jr., I. C. Kettelhut, and A. L. Goldberg</i> | E326 |
| Soluble and particulate phenylethanolamine <i>N</i> -methyltransferase in hypothalamus of diabetic rats <i>J. E. Chappell and J. K. Stewart</i> | E335 |
| Effects of prior exercise on the action of insulin-like growth factor I in skeletal muscle <i>E. J. Henriksen, L. L. Louters, C. S. Stump, and C. M. Tipton</i> | E340 |
| Metabolic regulation in peripheral tissues and transition to increased gluconeogenic mode during prolonged exercise <i>D. H. Wasserman, D. B. Lacy, D. Bracy, and P. E. Williams</i> | E345 |
| Stimulation of angiotensinogen mRNA levels in rat pituitary by estradiol <i>D. P. Healy, M.-Q. Ye, L.-X. Yuan, and B. S. Schachter</i> | E355 |
| Effect of aging and exercise on GLUT-4 glucose transporters in muscle <i>M. Kern, P. L. Dolan, R. S. Mazzeo, J. A. Wells, and G. L. Dohm</i> | E362 |
| Effect of total parenteral nutrition, systemic sepsis, and glutamine on gut mucosa in rats <i>S. Yoshida, M. J. Leskiw, M. D. Schluter, K. T. Bush, R. G. Nagele, S. Lanza-Jacoby, and T. P. Stein</i> | E368 |
| Apolipoprotein expression and cellular differentiation in Caco-2 intestinal cells <i>R. D. Wagner, E. S. Krul, J. B. Moberly, D. H. Alpers, and G. Schonfeld</i> | E374 |
| Insulin-regulated sorting of glucose transporters in 3T3-L1 adipocytes <i>L. J. Robinson and D. E. James</i> | E383 |
| Chronic stress enhances vasopressin but not corticotropin-releasing factor secretion during hypoglycemia <i>D. C. E. de Goeij, R. Binnekade, and F. J. H. Tilders</i> | E394 |

MODELING IN PHYSIOLOGY

| | |
|---|------|
| Estimation of the rate of appearance in the non-steady state with a two-compartment model <i>A. Mari</i> | E400 |
|---|------|

INVITED REVIEW

| | |
|--|------|
| On the determination of turnover in vivo with tracers <i>J. Katz</i> | E417 |
| <hr/> | |
| Abnormalities in cardiac α_1 -adrenoceptor and its signal transduction in streptozocin-induced diabetic rats <i>Y. Tanaka, A. Kashiwagi, Y. Saeki, and Y. Shigeta</i> | E425 |
| Effects of thyroid hormones on urinary and renal kallikreins <i>S. Avigdor, F. Alhenc-Gelas, and J. Bouhnik</i> | E430 |
| Plasma GSH/GSSG affects glucose homeostasis in healthy subjects and non-insulin-dependent diabetics <i>G. Paolisso, G. Di Maro, G. Pizza, A. D'Amore, S. Sgambato, P. Tesaro, M. Varricchio, and F. D'Onofrio</i> | E435 |
| Thermogenesis after surgery: effect of perioperative heat conservation and epidural anesthesia <i>F. Carli, J. Webster, P. Nandi, I. A. Macdonald, J. Pearson, and R. Mehta</i> | E441 |
| Energy metabolism and aging: a lifelong study of Fischer 344 rats <i>R. J. McCarter and J. Palmer</i> | E448 |
| Stimulation of protein synthesis in pig skeletal muscle by infusion of amino acids during constant insulin availability <i>P. W. Watt, M. E. Corbett, and M. J. Rennie</i> | E453 |
| Interleukin-1-induced corticosterone release occurs by an adrenergic mechanism from rat adrenal gland <i>A. R. Gwosdow, N. A. O'Connell, J. A. Spencer, M. S. A. Kumar, R. K. Agarwal, H. H. Bode, and A. B. Abou-Samra</i> | E461 |
| Effect of long-term rhGH administration in GH-deficient adults on fat cell epinephrine response <i>M. Beauville, I. Harant, F. Crampes, D. Riviere, M. T. Tauber, J. P. Tauber, and M. Garrigues</i> | E467 |
| Uptake of glucose carbon in muscle glycogen and adipose tissue triglycerides in vivo in humans <i>P. Mårin, I. Högh-Kristiansen, S. Jansson, M. Krotkiewski, G. Holm, and P. Björntorp</i> | E473 |
| Inhibitors of $\text{Na}^+\text{-H}^+$ exchange block stimulus-provoked pineal melatonin synthesis <i>A. K. Ho and C. L. Chik</i> | E481 |
| Dexamethasone acts locally to inhibit longitudinal bone growth in rabbits <i>J. Baron, Z. Huang, K. E. Oerter, J. D. Bacher, and G. B. Cutler, Jr.</i> | E489 |
| On the mechanism of stimulation of ureagenesis by gluconeogenic substrates: role of pyruvate carboxylase <i>A. Martin-Requero, G. Ciprés, A. Rodríguez, M. S. Ayuso, and R. Parrilla</i> | E493 |
| Regulation of expression of the lipoprotein lipase gene in brown adipose tissue <i>J. R. D. Mitchell, A. Jacobsson, T. G. Kirchgessner, M. C. Schotz, B. Cannon, and J. Nedergaard</i> | E500 |
| Effects of ovarian hormones on brain opioid binding sites in castrated female rats <i>D. Dondi, P. Limonta, R. Maggi, and F. Piva</i> | E507 |
| Evidence for the modulation of cell calcium by epinephrine in fish hepatocytes <i>J. Zhang, M. Désilets, and T. W. Moon</i> | E512 |
| Epitope mapping of monoclonal antibodies to bovine prolactin <i>J. G. Scammell, D. N. Luck, D. L. Valentine, and M. Smith</i> | E520 |
| Vasoconstrictor-induced secretion of ANP in fetal sheep <i>C. R. Rosenfeld, W. K. Samson, T. A. Roy, D. J. Faucher, and R. R. Magness</i> | E526 |
| Thyroid hormone effects on cardiac gene expression independent of cardiac growth and protein synthesis <i>K. Ojamaa, A. M. Samarel, J. M. Kupfer, C. Hong, and I. Klein</i> | E534 |

| | |
|--|------|
| Importance of basal glucagon in maintaining hepatic glucose production during a prolonged fast in conscious dogs <i>G. K. Hendrick, D. H. Wasserman, R. T. Frizzell, P. E. Williams, D. B. Lacy, J. B. Jasan, and A. D. Cherrington</i> | E541 |
| Interactions between insulin and glucocorticoids in the maintenance of genetic obesity <i>P. U. Dubuc</i> | E550 |
| Fasting and lactate unmask insulin responsiveness in the isolated working rat heart <i>R. R. Russell, III, V. T. B. Nguyễn, J. M. Mrus, and H. Taegtmeyer</i> | E556 |
| Pretranslational regulation of two cardiac glucose transporters in rats exposed to hypobaric hypoxia <i>W. I. Sivitz, D. D. Lund, B. Yorek, M. Grover-McKay, and P. G. Schmid</i> | E562 |
| Plasma carnitine in fasting neonatal and adult northern elephant seals <i>S. H. Adams, D. P. Costa, and S. C. Winter</i> | E570 |
| Single umbilical artery ligation-induced fetal growth retardation: effect on postnatal adaptation <i>K. Oyama, J. Padbury, B. Chappell, A. Martinez, H. Stein, and J. Humme</i> | E575 |

MODELING IN PHYSIOLOGY

| | |
|--|------|
| Stable isotope tracer analysis by GC-MS, including quantification of isotopomer effects <i>J. Rosenblatt, D. Chinkes, M. Wolfe, and R. R. Wolfe</i> | E584 |
|--|------|

No. 4. OCTOBER 1992

INVITED REVIEW

| | |
|--|------|
| V-A and A-V modes in whole body and regional kinetics: domain of validity from a physiological model <i>L. Saccà, G. Toffolo, and C. Cobelli</i> | E597 |
| Functional changes in salivary glands of autoimmune disease-prone NOD mice <i>Y. Hu, Y. Nakagawa, K. R. Purushotham, and M. G. Humphreys-Beher</i> | E607 |
| Effect of a high-fat diet on the incorporation of stored triacylglycerol into hepatic VLDL <i>O. L. Francone, G. Griffaton, and A.-D. Kalopissis</i> | E615 |
| Whole body protein metabolism and resting energy expenditure in pregnant Gambian women <i>L. Willommet, Y. Schutz, R. Whitehead, E. Jéquier, and E. B. Fern</i> | E624 |
| Inhibition of central actions of cytokines on fever and thermogenesis by lipocortin-1 involves CRF <i>P. J. Srijbos, A. J. Hardwick, J. K. Relton, F. Carey, and N. J. Rothwell</i> | E632 |
| Influence of somatotropin on lipid metabolism and IGF gene expression in porcine adipose tissue <i>C. K. Wolverton, M. J. Azain, J. Y. Duffy, M. E. White, and T. G. Ramsay</i> | E637 |
| Role of FFA-glucose cycle in glucoregulation during exercise in total absence of insulin <i>K. Yamatani, Z. Q. Shi, A. Giacca, R. Gupta, S. Fisher, H. L. A. Lickley, and M. Vranic</i> | E646 |
| Increased α_1 -adrenoceptor density in brown adipose tissue indicates recruitment drive in hypothyroid rats <i>A. Dicker, A. Raasmaja, B. Cannon, and J. Nedergaard</i> | E654 |
| Glucocorticoid increases glucose cycling and inhibits insulin release in pancreatic islets of <i>ob/ob</i> mice <i>A. Khan, C.-G. Östenson, P.-O. Berggren, and S. Efendic</i> | E663 |
| Isotopomer spectral analysis of triglyceride fatty acid synthesis in 3T3-L1 cells <i>A. T. Kharroubi, T. M. Masterson, T. A. Aldaghlis, K. A. Kennedy, and J. K. Kelleher</i> | E667 |
| Measurement of bicarbonate turnover in humans: applicability to estimation of energy expenditure <i>M. Elia, N. J. Fuller, and P. R. Murgatroyd</i> | E676 |

| | |
|---|------|
| Effects of differing insulin levels on response to equivalent hypoglycemia in conscious dogs S. N. Davis, R. Dobbins, C. Tarumi, C. Colburn, D. Neal, and A. D. Cherrington | E688 |
| Effect of hyperinsulinemia on ovine fetal leucine kinetics during prolonged maternal fasting E. A. Liechty, D. W. Boyle, H. Moorehead, Y. M. Liu, and S. C. Denne | E696 |
| Sepsis-induced insulin resistance in rats is mediated by a β -adrenergic mechanism C. H. Lang | E703 |
| Endocrine effects of new bombesin/gastrin-releasing peptide antagonists in rats J. Pinski, T. Yano, K. Groot, R.-Z. Cai, S. Radulovic, and A. V. Schally | E712 |
| Cyclooxygenase inhibitors blunt thromboxane action in human placental arteries by blocking thromboxane receptors B. M. Wilkes, A. M. Hollander, S. Sung, and P. F. Mento | E718 |
| Tissue-specific expression of bone proteins in femora of growing rats R. T. Turner, S. N. Kapelner, and T. C. Spelsberg | E724 |
| Concomitant interindividual variation in body temperature and metabolic rate R. Rising, A. Keys, E. Ravussin, and C. Bogardus | E730 |
| Ammonium chloride-induced acidosis increases protein breakdown and amino acid oxidation in humans D. Reich, S. M. Channon, C. M. Scrimgeour, and T. H. J. Goodship | E735 |
| Effects of peptide YY on the human cardiovascular system: reversal of responses to vasoactive intestinal peptide R. J. Playford, M. A. Benito-Orfila, P. Nihoyannopoulos, K. A. Nandha, J. Cockcroft, S. Todd, M. A. Ghatei, J. Domin, S. R. Bloom, and J. Calam | E740 |
| Differences in GH secretion from individual somatotropes in rats genetically selected for fast and slow growth J. R. Arbona, C. H. Rahe, R. L. Kelley, Y. N. Sinha, D. R. Strength, D. N. Marple, and D. R. Mulvaney | E748 |
| K ⁺ channels in adrenal zona glomerulosa cells. I. Characterization of distinct channel types P. M. Vassilev, M. V. Kanazirska, S. J. Quinn, D. L. Tillotson, and G. H. Williams | E752 |
| Single K ⁺ channels in adrenal zona glomerulosa cells. II. Inhibition by angiotensin II M. V. Kanazirska, P. M. Vassilev, S. J. Quinn, D. L. Tillotson, and G. H. Williams | E760 |
| Metabolism of pregnant-lactating rats is adapted to pregnancy rather than to lactation S. Wijkstra, H. Moes, and T. R. Koiter | E766 |
| Posthepatic rate of appearance of insulin: measurement and validation in the nonsteady state T. Morishima, S. Pye, C. Bradshaw, and J. Radziuk | E772 |
| Effect of gender on insulin resistance associated with aging A. Franssila-Kallunki, C. Schalin-Jäntti, and L. Groop | E780 |
| Fetal serine fluxes across fetal liver, hindlimb, and placenta in late gestation I. Cetin, P. V. Fennessey, J. W. Sparks, G. Meschia, and F. C. Battaglia | E786 |
| Meal stimulation of albumin synthesis: a significant contributor to whole body protein synthesis in humans P. De Feo, F. F. Horber, and M. W. Haymond | E794 |
| Regulation of prostacyclin production by $[Ca^{2+}]_i$ and protein kinase C in aortic smooth muscle cells A.-C. Erbrich, D. J. Church, M. B. Vallotton, and U. Lang | E800 |

No. 5. NOVEMBER 1992

INVITED REVIEW

| | |
|--|------|
| Sites of infusion and sampling for measurement of rates of production in steady state K. H. Norwich | E817 |
|--|------|

| | |
|---|------|
| Suppression of central noradrenergic neuronal activity inhibits hyperglycemia <i>G. A. Smythe and S. R. Edwards</i> | E823 |
| Selective expression of an arachidonate 12-lipoxygenase by pancreatic islet β -cells <i>V. R. Shannon, S. Ramanadham, J. Turk, and M. J. Holtzman</i> | E828 |
| Role of angiotensin II and α -adrenergic receptors during estrogen-induced vasodilation in ewes <i>L. E. Davis, R. R. Magness, and C. R. Rosenfeld</i> | E837 |
| Glucose kinetics following administration of an intravenous fat emulsion to low-birth-weight neonates <i>K. A. Yunis, W. Oh, S. Kalhan, and R. M. Cowett</i> | E844 |
| Thermogenic response to epinephrine in the forearm and abdominal subcutaneous adipose tissue <i>L. Simonsen, J. Bülow, J. Madsen, and N. J. Christensen</i> | E850 |
| Effects of streptozotocin-induced diabetes on rough endoplasmic reticulum and lysosomes of rat liver <i>S. E. Lenk, D. Bhat, W. Blakeney, and W. A. Dunn, Jr.</i> | E856 |
| Reciprocal feedback regulation of kidney angiotensinogen and renin mRNA expressions by angiotensin II <i>H. Schunkert, J. R. Ingelfinger, H. Jacob, B. Jackson, B. Bouyounes, and V. J. Dzau</i> | E863 |
| Pharmacokinetics of ANF and urodilatin during cANF receptor blockade and neutral endopeptidase inhibition <i>Z. A. Abassi, J. Tate, S. Hunsberger, H. Klein, D. Trachewsky, and H. R. Keiser</i> | E870 |
| Fasting and postmeal phenylalanine metabolism in mild type 2 diabetes <i>G. Biolo, P. Tessari, S. Inchiostro, D. Bruttomesso, L. Sabadin, C. Fongher, G. Panebianco, M. G. Fratton, and A. Tiengo</i> | E877 |
| Adrenergic regulation of type II 5'-deiodinase circadian rhythm in rat harderian gland <i>C. Osuna, J. Jimenez, R. J. Reiter, A. Rubio, and J. M. Guerrero</i> | E884 |
| Glucose-induced insulin release in islets of young rats: time-dependent potentiation and effects of 2-bromostearate <i>C. R. Bliss and G. W. G. Sharp</i> | E890 |
| Inhibition of hepatic ketogenesis by tumor necrosis factor- α in rats <i>M. Beylot, H. Vidal, G. Mithieux, M. Odeon, and C. Martin</i> | E897 |
| Complex effects of arachidonic acid and its lipoxygenase products on cytosolic calcium in GH ₃ cells <i>P. Vacher, J. McKenzie, and B. Dufy</i> | E903 |
| Visceral fat accumulation in obese subjects: relation to energy expenditure and response to weight loss <i>R. Leenen, K. van der Kooy, P. Deurenberg, J. C. Seidell, J. A. Weststrate, F. J. M. Schouten, and J. G. A. J. Hautvast</i> | E913 |
| Early metabolic consequences of epidermal growth factor administration to neonatal rats <i>M. M. Donnelly, S. B. Hoath, and W. F. Pickens</i> | E920 |
| Leucine as a regulator of whole body and skeletal muscle protein metabolism in humans <i>K. S. Nair, R. G. Schwartz, and S. Welle</i> | E928 |
| Hypertension and insulin resistance: role of sympathetic nervous system activity <i>M. A. Supiano, R. V. Hogikyan, L. A. Morrow, F. J. Ortiz-Alonso, W. H. Herman, R. N. Bergman, and J. B. Halter</i> | E935 |
| Oxoanions stimulate in vitro ovulation and signal transduction pathways in goldfish (<i>Carassius auratus</i>) follicles <i>S.-Y. Hsu and F. W. Goetz</i> | E943 |
| Endurance training does not enhance total energy expenditure in healthy elderly persons <i>M. I. Goran and E. T. Poehlman</i> | E950 |
| Regulation of protein synthesis by modulation of intracellular calcium in rat liver <i>S. R. Kimball and L. S. Jefferson</i> | E958 |
| Precision and accuracy of doubly labeled water energy expenditure by multipoint and two-point methods <i>T. J. Cole and W. A. Coward</i> | E965 |

- Membrane receptors for aldosterone: a novel pathway for mineralocorticoid action
M. Wehling, M. Christ, and K. Theisen E974
- Influence of growth hormone on glucose-glucose 6-phosphate cycle and insulin action in normal humans
R. D. G. Neely, D. P. Rooney, P. M. Bell, N. P. Bell, B. Sheridan, A. B. Atkinson, and E. R. Trimble E980

SPECIAL COMMUNICATIONS

- Mass isotopomer distribution analysis: a technique for measuring biosynthesis and turnover of polymers
M. K. Hellerstein and R. A. Neese E988
- In vivo estimation of lactose hydrolysis in premature infants using a dual stable tracer technique
C. L. Kien, K. Ault, and R. E. McClead E1002
- Heated dorsal hand vein sampling for metabolic studies: a reappraisal
K. C. Copeland, F. A. Kenney, and K. S. Nair E1010

RAPID COMMUNICATION

- Muscle glucose transport, GLUT-4 content, and degree of exercise training in obese Zucker rats
E. A. Banks, J. T. Brozinick, Jr., B. B. Yaspelkis III, H. Y. Kang, and J. L. Ivy E1015

No. 6. DECEMBER 1992

- Plasma membrane domain localization and transcytosis of the glucagon-induced hepatic system A carrier
R. Cariappa and M. S. Kilberg E1021
- Disuse osteopenia is accompanied by downregulation of gene expression for bone proteins in growing rats
G. K. Wakley, J. S. Portwood, and R. T. Turner E1029
- Lactate in rat skeletal muscle after hemorrhage measured by microdialysis probe calibrated in situ
C. Okuda, T. Sawa, M. Harada, T. Murakami, T. Matsuda, and Y. Tanaka E1035
- Effect of moderate cold exposure on 24-h energy expenditure: similar response in postobese and nonobese women
B. Buemann, A. Astrup, N. J. Christensen, and J. Madsen E1040
- Effects of high levels of fatty acids on functional recovery of ischemic hearts from diabetic rats
G. D. Lopaschuk, M. Saddik, R. Barr, L. Huang, C. C. Barker, and R. A. Muzyka E1046
- Upregulation of V_{1a} vasopressin receptors by glucocorticoids
P. Colson, J. Ibarondo, G. Devilliers, M. N. Balestre, A. Duvoid, and G. Guillon E1054
- Regulation of free fatty acid metabolism by insulin in humans: role of lipolysis and reesterification
P. J. Campbell, M. G. Carlson, J. O. Hill, and N. Nurjhan E1063
- 1,25(OH) $_2$ D $_3$ blunts hormone-elevated cytosolic Ca $^{2+}$ in osteoblast-like cells
J. Green, C. R. Kleeman, S. Schotland, and L. H. Ye E1070
- Production of parathyroid hormone-related protein by the rat mammary gland in pregnancy and lactation
M. Rakopoulos, S. J. Vargas, M. T. Gillespie, P. W. M. Ho, H. Diefenbach-Jagger, D. D. Leaver, V. Grill, J. M. Moseley, J. A. Danks, and T. J. Martin E1077
- Hypoxia causes glycogenolysis without an increase in percent phosphorylase a in rat skeletal muscle
J.-M. Ren, E. A. Gulve, G. D. Cartee, and J. O. Holloszy E1086
- Development and application of a radioimmunoassay to detect interleukin-1 in rat peripheral circulation
R. Derijk and F. Berkenbosch E1092

| | |
|--|-------|
| Chronic infusion of TNF- α reduces plasma T ₄ binding without affecting pituitary-thyroid activity in rats <i>C. G. J. Sweep, M. J. M. van der Meer, H. A. Ross, R. Vranckx, T. J. Visser, and A. R. M. M. Hermus</i> | E1099 |
| Effects of insulin on total RNA, poly(A) ⁺ RNA, and mRNA in primary cultures of rat hepatocytes <i>C.-J. Hsu, S. R. Kimball, D. A. Antonetti, and L. S. Jefferson</i> | E1106 |
| Dose-dependent effects of aluminum on osteocalcin synthesis in osteoblast-like ROS 17/2 cells in culture <i>P. Fanti, M. S. Kindy, S. Mohapatra, J. Klein, G. Colombo, and H. H. Malluche</i> | E1113 |
| Effect of gender, body composition, and equilibration time on the ² H-to- ¹⁸ O dilution space ratio <i>M. I. Goran, E. T. Poehlman, K. S. Nair, and E. Danforth, Jr.</i> | E1119 |
| Central hypertensinogenic effects of glycyrrhizic acid and carbenoxolone <i>E. P. Gomez-Sanchez and C. E. Gomez-Sanchez</i> | E1125 |
| Hyperglycemic athymic nude mice: factors affecting in vitro insulin secretion <i>A. Zeidler, P. Edwards, J. Goldman, S. Kort, W. P. Meehan, and S. R. Levin</i> | E1131 |
| Effect of training on insulin-mediated glucose uptake in human muscle <i>F. Dela, K. J. Mikines, M. von Linstow, N. H. Secher, and H. Galbo</i> | E1134 |
| A reexamination of the effect of exercise on rate of muscle protein degradation <i>G. J. Kasperek, G. R. Conway, D. S. Krayeski, and J. J. Lohne</i> | E1144 |
| Effects of acute hypoxemia on insulin-like growth factors and their binding proteins in fetal sheep <i>H. S. Iwamoto, M. A. Murray, and S. D. Chernausk</i> | E1151 |
| Exercise interrupts ongoing glucocorticoid-induced muscle atrophy and glutamine synthetase induction <i>M. T. Falduto, A. P. Young, and R. C. Hickson</i> | E1157 |
| Metabolic acidosis reverses the increase in serum 1,25(OH) ₂ D in phosphorus-restricted normal men <i>A. A. Portale, B. P. Halloran, S. T. Harris, D. D. Bikle, and R. C. Morris, Jr.</i> | E1164 |
| <hr/> | |
| <i>Subject Index to Volume 26</i> | E1171 |
| <i>Author Index to Volume 26</i> | E1181 |

CORRIGENDA

Volume 262, April 1992

Volume 25, April 1992

Pages E383-E388: M. C. Michel, F. Feth, and W. Rascher. "NPY-stimulated Ca²⁺ mobilization SK-N-MC cells is enhanced after isoproterenol treatment." Page E386: line 11 on the right should read as follows: Similarly, the corresponding EC₅₀ for carbachol was also not statistically significantly altered (242 ± 44 vs. 143 ± 63 μM, *P* = 0.329).

American Journal of Physiology: Gastrointestinal and Liver Physiology

No. 1. JULY 1992

| | |
|--|------|
| Duodenal intramural nerves in control of pyloric motility and gastric emptying <i>P. J. Treacy, G. G. Jamieson, J. Dent, P. G. Devitt, and R. Heddle</i> | G1 |
| Increased lymphatic flux of hyaluronan from cat intestine during fat absorption <i>R. K. Reed, M. I. Townsley, V. H. Pitts, T. C. Laurent, and A. E. Taylor</i> | G6 |
| Neurohormonal mechanism of pancreatic exocrine secretion stimulated by sodium oleate and L-tryptophan in dogs <i>Y. H. Jo, Y. L. Lee, K. Y. Lee, T.-M. Chang, and W. Y. Chey</i> | G12 |
| Evidence for Kupffer cell migration along liver sinusoids, from high-resolution in vivo microscopy <i>P. J. MacPhee, E. E. Schmidt, and A. C. Groom</i> | G17 |
| Effect of erythromycin on gastric myoelectrical activity in normal human subjects <i>J. Chen, P. Yeaton, and R. W. McCallum</i> | G24 |
| Peptidergic nerves mediate post-nerve stimulation hyperemia in rat gut <i>O. D. Hottenstein, G. Remak, and E. D. Jacobson</i> | G29 |
| Differential alterations in microvascular perfusion in various organs during early and late sepsis <i>P. Wang, M. Zhou, M. W. Rana, Z. F. Ba, and I. H. Chaudry</i> | G38 |
| ATP induces two cholecystokinin binding affinity states in permeabilized rat pancreatic acini <i>G. T. Blevins, Jr. and J. A. Williams</i> | G44 |
| Effects of erythromycin in the dog upper gastrointestinal tract <i>G. E. Holle, E. Steinbach, and W. Forth</i> | G52 |
| Enhanced sinusoidal glutathione efflux during endotoxin-induced oxidant stress in vivo <i>H. Jaeschke</i> | G60 |
| Gallbladder mucosal function: studies in absorption and secretion in humans and in dog gallbladder epithelium <i>H. Igimi, F. Yamamoto, and S. P. Lee</i> | G69 |
| Renal failure increases gastric mucosal blood flow and acid secretion in rats: role of endothelium-derived nitric oxide <i>E. Quintero and P. H. Guth</i> | G75 |
| Uptake of biotin by isolated rat liver mitochondria <i>H. M. Said, L. McAlister-Henn, R. Mohammadkhani, and D. W. Horne</i> | G81 |
| Guanylate cyclase inhibitors: effect on inhibitory junction potentials in esophageal smooth muscle <i>J. L. Conklin and C. Du</i> | G87 |
| Submucosal reflexes: distension-evoked ion transport in the guinea pig distal colon <i>T. Frieling, J. D. Wood, and H. J. Cooke</i> | G91 |
| Guanylate cyclase inhibitors: effect on tone, relaxation, and cGMP content of lower esophageal sphincter <i>J. A. Murray, C. Du, A. Ledlow, P. L. Manternach, and J. L. Conklin</i> | G97 |
| Cholecystokinin at physiological levels evokes pancreatic enzyme secretion via a cholinergic pathway <i>H. C. Soudah, Y. Lu, W. L. Hasler, and C. Owyang</i> | G102 |
| Stimulation of intramural secretory reflex by luminal distension pressure in rat distal colon <i>S. Itasaka, K. Shiratori, T. Takahashi, M. Ishikawa, K. Kaneko, and Y. Suzuki</i> | G108 |
| Role of chloride ions in lower esophageal sphincter tone and relaxation <i>J. K. Saha, J. N. Sengupta, and R. K. Goyal</i> | G115 |

LETTERS TO THE EDITOR

Chloride-mediated inhibitory junction potentials in opossum esophageal circular smooth muscle

E. E. Daniel, J. Jury, F. Christinck, and F. Cayabyab; J. R. Crist, X. D. He, and R. K. Goyal

G135

No. 2. AUGUST 1992

INVITED REVIEW

The liver as a stem cell and lineage system

S. H. Sigal, S. Brill, A. S. Fiorino, and L. M. Reid

G139

Role of EDRF in splanchnic blood flow of normal and chronic portal hypertensive rats

F. Iwata, T. Joh, T. Kawai, and M. Itoh

G149

Effect of aspirin on ulcer site blood flow in cat stomachs

A. T. S. Lau, G. G. Graham, R. O. Day, and M. A. Perry

G155

Innervation of pylorus in control of motility and gastric emptying

G. E. Holle, D. Hahn, and W. Forth

G161

Polyamine transport systems in isolated rat hepatocytes derived from resting and regenerating livers

G. Y. Minuk, A. Bennaroch, and L. X. Ding

G169

Immunocytochemical studies suggest two pathways for enteroendocrine cell differentiation in the colon

K. A. Roth, S. Kim, and J. I. Gordon

G174

Cardiac performance in the portal vein-stenosed rat

H. D. Battarbee and J. H. Zavec

G181

Regulation of gene expression in gastric epithelial cell populations of fetal, neonatal, and adult transgenic mice

K. A. Roth, S. M. Cohn, D. C. Rubin, J. F. Trahair, M. R. Neutra, and J. I. Gordon

G186

Impaired acetylcholine release in the inflamed rat intestine is T cell independent

S. M. Collins, P. Blennerhassett, D. L. Vermillion, K. Davis, J. Langer, and P. B. Ernst

G198

Changes in antroduodenal resistance induced by Cisapride in conscious dogs

C. H. Malbert, J. P. Serthelon, and J. Dent

G202

Capsaicin-induced hyperemia in the stomach: possible contribution of mast cells

J. L. Wallace, G. W. McKnight, and A. D. Befus

G209

Differential regulation of cytochrome P-450 genes along rat intestinal crypt-villus axis

P. G. Traber, W. Wang, and L. Yu

G215

Polyamines attenuate jejunal mucosal injury induced by oleic acid

P. R. Kvietys, R. D. Specian, and G. Cepinskas

G224

Measurement of axial forces during emptying from the human stomach

M. J. Vassallo, M. Camilleri, C. M. Prather, R. B. Hanson, and G. M. Thomforde

G230

Bombesin receptors interact with G_i and p21^{ras} proteins in plasma membranes from rat pancreatic acinar cells

A. Pröfrock, P. Zimmermann, and I. Schulz

G240

Preservation and propagation of cyclic myoelectric activity after feeding in rat small intestine

M. E. Zenilman, J. E. Parodi, and J. M. Becker

G248

Influence of luminal nutrient composition on hemodynamics and oxygenation in developing intestine

K. D. Crissinger and D. L. Burney

G254

| | |
|---|------|
| Two-dimensional coupling by gap junctions in cultured gastric smooth muscle monolayers | |
| <i>D. M. Larson, R. J. Gilbert, and E. C. Beyer</i> | G261 |
| Characterization of opioid receptors in intestinal muscle cells by selective radioligands and receptor protection | |
| <i>J. F. Kuemmerle and G. M. Makhlouf</i> | G269 |

RAPID COMMUNICATION

| | |
|---|------|
| NADPH diaphorase and nitric oxide synthase colocalization in enteric neurons of canine proximal colon | |
| <i>S. M. Ward, C. Xue, C. W. Shuttleworth, D. S. Bredt, S. H. Snyder, and K. M. Sanders</i> | G277 |

ANNOUNCEMENTS

G285

No. 3. SEPTEMBER 1992

| | |
|---|------|
| Cholecystokinin inhibits gastric acid secretion through type "A" cholecystokinin receptors and somatostatin in rats | |
| <i>K. C. K. Lloyd, H. E. Raybould, and J. H. Walsh</i> | G287 |
| Hypoxic liver injury and the ameliorating effects of fructose: the "glucose paradox" revisited | |
| <i>C. A. Brass, J. M. Crawford, J. Narciso, and J. L. Gollan</i> | G293 |
| Regional differences in gut blood flow and mucosal damage in response to ischemia and reperfusion | |
| <i>F. W. Leung, K. C. Su, E. Passaro, Jr., and P. H. Guth</i> | G301 |
| Ascending contraction mediated by 5-hydroxytryptamine ₃ receptors in canine small intestine | |
| <i>M. Mizutani, T. Neya, and S. Nakayama</i> | G306 |
| Expression and localization of GLUT-5 in Caco-2 cells, human small intestine, and colon | |
| <i>L. Mahraoui, M. Rousset, E. Dussaulx, D. Darmoul, A. Zweibaum, and E. Brot-Laroche</i> | G312 |
| Subacinar distribution of hepatocyte membrane potential response to stimulation of gluconeogenesis | |
| <i>S.-M. Lee and M. G. Clemens</i> | G319 |
| CCK, bombesin, and carbachol stimulate <i>c-fos</i> , <i>c-jun</i> , and <i>c-myc</i> oncogene expression in rat pancreatic acini | |
| <i>L. Lu and C. D. Logsdon</i> | G327 |
| Lytic effects of mixed micelles of fatty acids and bile acids | |
| <i>J. A. Lapré, D. S. M. L. Termont, A. K. Groen, and R. van der Meer</i> | G333 |
| Carrier-mediated transport of tetrabromosulfonephthalein by rat liver plasma membrane vesicles | |
| <i>A. M. Torres, J. V. Rodriguez, G. C. Lunazzi, and C. Tiribelli</i> | G338 |
| cDNA cloning and localization of a band 3-related protein from ileum | |
| <i>A. Chow, J. W. Dobbins, P. S. Aronson, and P. Igarashi</i> | G345 |
| Effects of nerve stimulation and zymosan on glycogenolysis in perfused livers from cold-exposed rats | |
| <i>M. Shiota, Y. Kurano, Y. Mochizuki, K. Kimura, M. Ohta, and T. Sugano</i> | G353 |
| A primary role for protein kinase A in smooth muscle relaxation induced by adrenergic agonists and neuropeptides | |
| <i>Z. F. Gu, R. T. Jensen, and P. N. Maton</i> | G360 |
| Characterization of colonic circular smooth muscle cells in culture | |
| <i>H. S. Ennes, J. A. McRoberts, P. E. Hyman, and W. J. Snape, Jr.</i> | G365 |
| Development of Ca ²⁺ homeostasis in epithelial cells from embryonic and neonatal intestine | |
| <i>B. L. Black and J. O. Rogers</i> | G371 |

| | |
|--|------|
| Sex differences in hepatic fatty acid uptake reflect a greater affinity of the transport system in females <i>D. Sorrentino, S.-L. Zhou, E. Kokkotou, and P. D. Berk</i> | G380 |
| Bile salt hydrophobicity controls vesicle secretion rates and transformations in native bile <i>D. E. Cohen, L. S. Leighton, and M. C. Carey</i> | G386 |
| Effects of agonists on p21 ^{ras} and ras-related proteins in rat pancreatic acinar cells <i>P. Zimmermann, S. Schnefel, S. Zeuzem, A. Pröfrock, W. Haase, and I. Schulz</i> | G396 |
| Rabbit esophageal cell cytoplasmic pH regulation: role of Na ⁺ -H ⁺ antiport, and Na ⁺ -dependent HCO ₃ ⁻ transport systems <i>T. J. Layden, L. Schmidt, L. Agnone, P. Lisitza, J. Brewer, and J. L. Goldstein</i> | G407 |
| Interleukin-1 β acts at hypothalamic sites to inhibit gastric acid secretion in rats <i>E. Saperas, H. Yang, and Y. Taché</i> | G414 |
| Mechanism of action of cholecystokinin octapeptide on cat lower esophageal sphincter <i>A. M. F. Salapatek, T. Hynna-Liepert, and N. E. Diamant</i> | G419 |

SPECIAL COMMUNICATION

| | |
|--|------|
| Migration of IEC-6 cells: a model for mucosal healing <i>S. A. McCormack, M. J. Viar, and L. R. Johnson</i> | G426 |
|--|------|

No. 4. OCTOBER 1992

| | |
|---|------|
| Rebound elevation of fibronectin after tissue injury and ischemia: role of fibronectin synthesis <i>P. N. Thompson, E. Cho, F. A. Blumenstock, D. M. Shah, and T. M. Saba</i> | G437 |
| Role of prostaglandins in regulation of gastric mucosal blood flow and acid secretion <i>L. Holm and A. Jägar</i> | G446 |
| Pepsinogen secretion from streptolysin O-permeabilized chief cells from guinea pig stomach <i>R. D. Raffaniello and J.-P. Raufman</i> | G452 |
| Gastrin induction of histamine release from primary cultures of canine oxyntic mucosal cells <i>C.-N. Chuang, M. Tanner, M. C. Y. Chen, S. Davidson, and A. H. Soll</i> | G460 |
| Rat intestinal angiotensin-converting enzyme: purification, properties, expression, and function <i>R. H. Erickson, Y. Suzuki, A. Sedlmayer, I. S. Song, and Y. S. Kim</i> | G466 |
| Intestinal myoelectrical activity and transit time in chronic portal hypertension <i>J. J. Stewart, H. D. Battarbee, G. E. Farrar, and K. W. Betzing</i> | G474 |
| Intestinal uptake and lymphatic absorption of β -carotene in ferrets: a model for human β -carotene metabolism <i>X.-D. Wang, N. I. Krinsky, R. P. Marini, G. Tang, J. Yu, R. Hurley, J. G. Fox, and R. M. Russell</i> | G480 |
| Role of adenosine in postprandial and reactive hyperemia in canine jejunum <i>D. R. Sawmiller and C. C. Chou</i> | G487 |
| Effect of putrescine on S-adenosylmethionine decarboxylase in a small intestinal crypt cell line <i>J.-Y. Wang, M. J. Viar, S. A. McCormack, and L. R. Johnson</i> | G494 |
| Galanin-induced alteration of electrolyte transport in the rat intestine <i>T. Kiyohara, M. Okuno, H. Ishikawa, T. Nakanishi, Y. Shinomura, C. Yanaihara, and Y. Matsuzawa</i> | G502 |
| Effects of thyrotropin-releasing hormone on neurons in rat dorsal motor nucleus of the vagus, in vitro <i>R. A. Travagli, R. A. Gillis, and S. Vicini</i> | G508 |
| Effects of fractionated doses of ionizing radiation on colonic motor activity <i>M. F. Otterson, S. K. Sarna, S. C. Leming, J. E. Moulder, and J. G. Fink</i> | G518 |
| Secretin stimulates bile ductular secretory activity through the cAMP system <i>R. Lenzen, G. Alpini, and N. Tavaloni</i> | G527 |

| | |
|---|------|
| Response of migrating motor complex to variation of fasting intraluminal content <i>D. Smith, B. Waldron, and F. C. Campbell</i> | G533 |
| Ontogeny of intestinal lactase: posttranslational regulation by thyroxine <i>T. Liu, A. M. Reisenauer, and R. O. Castillo</i> | G538 |
| Pharmacology of portal-systemic collaterals in portal hypertensive rats: role of endothelium <i>P. Mosca, F.-Y. Lee, A. J. Kaumann, and R. J. Groszmann</i> | G544 |
| Diaphragmatic contribution to gastroesophageal competence and reflux in dogs <i>C. J. Martin, W. J. Dodds, H. H. Liem, R. O. Dantas, R. D. Layman, and J. Dent</i> | G551 |
| Effects of NH_4Cl and dimethylamine on Cl^- fluxes in resting and stimulated rat submandibular acinar cells <i>JC Seagrave, S. Barker, M. Curry, and J. R. Martinez</i> | G558 |
| Mouse hepatocyte membrane potential and chloride activity during osmotic stress <i>K. Wang and R. Wondergem</i> | G566 |
| Vulnerability of intestinal interstitial fluid to oxidant stress <i>H. Kurtel, D. N. Granger, P. Tso, and M. B. Grisham</i> | G573 |
| Antibodies to tumor necrosis factor- α inhibit liver regeneration after partial hepatectomy <i>P. Akerman, P. Cote, S. Q. Yang, C. McClain, S. Nelson, G. J. Bagby, and A. M. Diehl</i> | G579 |

No. 5. NOVEMBER 1992

| | |
|---|------|
| Role of platelet-activating factor in hepatic responses after bile duct ligation in rats <i>W. Zhou, W. Chao, B. A. Levine, and M. S. Olson</i> | G587 |
| Ontogenetic development of nutrient transporters in rat intestine <i>E. M. Toloza and J. Diamond</i> | G593 |
| Ontogenetic development of nutrient transporters in cat intestine <i>R. K. Buddington and J. Diamond</i> | G605 |
| Glutathione as a primary osmotic driving force in hepatic bile formation <i>N. Ballatori and A. T. Truong</i> | G617 |
| Constitutive expression of the taurine transporter in a human colon carcinoma cell line <i>C. Tiruppathi, M. Brandsch, Y. Miyamoto, V. Ganapathy, and F. H. Leibach</i> | G625 |
| Histamine potentiation by hydroxylamines: structure-activity relations; inhibition of diamine oxidase <i>P. K. Rangachari, T. Prior, R. A. Bell, and T. Huynh</i> | G632 |
| Importance of the liver in plasma clearance of hepatocyte growth factor in rats <i>K.-X. Liu, Y. Kato, M. Narukawa, D. C. Kim, M. Hanano, O. Higuchi, T. Nakamura, and Y. Sugiyama</i> | G642 |
| Connexins and glucagon receptors during development of rat hepatic acinus <i>V. M. Berthoud, V. Iwanij, A. M. Garcia, and J. C. Sáez</i> | G650 |
| Neurokinin ₃ receptor regulation of acetylcholine release from myenteric plexus <i>W. M. Yau, K. G. Mandel, J. A. Dorsett, and M. L. Youter</i> | G659 |
| Intestinal absorption and lymphatic transport of peroxidized lipids in rats: effect of exogenous GSH <i>T. Y. Aw and M. W. Williams</i> | G665 |
| Symptomatic responses to stimulation of sensory pathways in the jejunum <i>A. M. Accarino, F. Azpiroz, and J.-R. Malagelada</i> | G673 |
| Neuropeptides promote neutrophil adherence to endothelial cell monolayers <i>B. J. Zimmerman, D. C. Anderson, and D. N. Granger</i> | G678 |
| Sphincter of Oddi regulates flow by acting as a variable resistor to flow <i>Y.-F. Liu, G. T. P. Saccone, A. Thune, R. A. Baker, J. R. Harvey, and J. Toouli</i> | G683 |
| Effect of increased tissue oxygen uptake on autoregulation in postnatal intestine <i>P. T. Nowicki and C. E. Miller</i> | G690 |
| Structural requirements of peptide YY for biological activity at enteric sites <i>K. Yoshinaga, T. Mochizuki, N. Yanaihara, K. Oshima, M. Izukura, M. Kogire, S. Sumi, G. Gomez, T. Uchida, J. C. Thompson, and G. H. Greeley, Jr.</i> | G695 |

| | |
|---|------|
| Passive autoregulation of portal venous pressure: distensible hepatic resistance W. W. Lautt and D. J. Legare | G702 |
| Electrophysiological identification of vagally innervated enteric neurons in guinea pig stomach M. Schemann and D. Grundy | G709 |
| <i>Helicobacter pylori</i> -associated ammonia production enhances neutrophil-dependent gastric mucosal cell injury M. Suzuki, S. Miura, M. Suematsu, D. Fukumura, I. Kurose, H. Suzuki, A. Kai, Y. Kudoh, M. Ohashi, and M. Tsuchiya | G719 |
| Hypothalamic neuropeptide Y inhibits gastric acid output in rat: role of the autonomic nervous system G. A. Humphreys, J. S. Davison, and W. L. Veale | G726 |
| A new method for quantitating intracellular transport: application to the thyroid hormone 3,5,3'-triiodothyronine B. A. Luxon and R. A. Weisiger | G733 |
| Protein kinase C regulation of IEC-6 cell ornithine decarboxylase G. E. Groblewski, D. K. Ways, and E. R. Seidel | G742 |
| Coordination of deglutition and phases of respiration: effect of aging, tachypnea, bolus volume, and chronic obstructive pulmonary disease R. Shaker, Q. Li, J. Ren, W. F. Townsend, W. J. Dodds, B. J. Martin, M. K. Kern, and A. Rynders | G750 |
| Caco-2 cell transfection by rat intestinal alkaline phosphatase cDNA increases surfactant-like particles C. C. Tietze, M. J. Becich, M. Engle, W. F. Stenson, A. Mahmood, R. Eliakim, and D. H. Alpers | G756 |
| Mechanisms of neurotensin-induced inhibition in rat ileal smooth muscle H. D. Allescher, H. Fick, V. Schusdziarra, and M. Classen | G767 |
| Organic cation transport by rat liver plasma membrane vesicles: studies with tetraethylammonium R. H. Moseley, S. M. Jarose, and P. Permod | G775 |
| Cation channels in basolateral membrane of sheep parotid secretory cells E. A. Wegman, T. Ishikawa, J. A. Young, and D. I. Cook | G786 |
| Biomechanical properties of duodenal wall and duodenal tone during phase I and phase II of the MMC H. Gregersen, K. Orvar, and J. Christensen | G795 |
| Pharmacokinetics and organ specific metabolism of glycine-extended and amidated gastrin in sheep G. D. Ciccotosto and A. Shulkes | G802 |

SPECIAL COMMUNICATION

| | |
|--|------|
| Limitations of laser-Doppler velocimetry and reflectance spectrophotometry in estimating gastric mucosal blood flow M. Casadevall, J. Panés, J. M. Piqué, J. Bosch, J. Terés, and J. Rodés | G810 |
|--|------|

RAPID COMMUNICATION

| | |
|--|------|
| Novel sites for expression of an <i>Escherichia coli</i> heat-stable enterotoxin receptor in the developing rat D. W. Laney, Jr., E. A. Mann, S. C. Dellon, D. R. Perkins, R. A. Giannella, and M. B. Cohen | G816 |
|--|------|

No. 6. DECEMBER 1992

INVITED REVIEW

| | |
|--|------|
| Regulation of electrolyte and fluid secretion in salivary acinar cells B. Nauntofte | G823 |
|--|------|

| | |
|--|------|
| Actions of 5-hydroxytryptamine on myenteric neurons in guinea pig gastric antrum J. F. Tack, J. Janssens, G. Vantrappen, and J. D. Wood | G838 |
|--|------|

| | |
|--|------|
| Neuroimmune interactions: role for cholinergic neurons in intestinal anaphylaxis <i>N. H. Javed, Y.-Z. Wang, and H. J. Cooke</i> | G847 |
| Spatial analysis of transcriptional activation in fetal rat jejunal and ileal gut epithelium <i>D. C. Rubin</i> | G853 |
| Human colon cancer cells express ICAM-1 in vivo and support LFA-1-dependent lymphocyte adhesion in vitro <i>C. P. Kelly, J. C. O'Keane, J. Orellana, P. C. Schroy III, S. Yang, J. T. LaMont, and H. R. Brady</i> | G864 |
| Hepatic Na ⁺ -dicarboxylate cotransport: identification, characterization, and acinar localization <i>R. H. Moseley, S. Jarose, and P. Permod</i> | G871 |
| Modulation of cat antral slow waves by ion substitution, Ca ²⁺ and K ⁺ channel blockade, and ACh stimulation <i>L. M. Renzetti, M. B. Wang, and J. P. Ryan</i> | G880 |
| Patterns of electrical activity and neural responses in canine proximal duodenum <i>O. Bayguinov, F. Vogalis, B. Morris, and K. M. Sanders</i> | G887 |
| Differential effects of ATP-MgCl ₂ on portal and hepatic arterial blood flow after hemorrhage and resuscitation <i>P. Wang, Z. F. Ba, and I. H. Chaudry</i> | G895 |
| Chief cells possess a receptor with high affinity for PACAP and VIP that stimulates pepsinogen release <i>C. P. Felley, J.-M. Qian, S. Mantey, T. Pradhan, and R. T. Jensen</i> | G901 |
| Somatostatin restraint of gastrin secretion in pigs revealed by monoclonal antibody immunoneutralization <i>J. J. Holst, P. N. Jørgensen, T. N. Rasmussen, and P. Schmidt</i> | G908 |
| Osmolarity reduction transiently increases K ⁺ conductance of confluent rat hepatocytes in primary culture <i>F. Wehner, G. Beetz, and S. Rosin-Steiner</i> | G913 |
| Aspirin-induced acute gastric mucosal injury is a neutrophil-dependent process in rats <i>M. Lee, K. Aldred, E. Lee, and M. Feldman</i> | G920 |
| Uptake and metabolism of circulating fatty acids by rat intestine <i>C. M. Mansbach II and R. F. Dowell</i> | G927 |
| Differential expression of early response genes, <i>c-jun</i> , <i>c-fos</i> , and <i>jun B</i> , in A5 cells <i>C.-K. Yeh, I. S. Ambudkar, and E. Kousvelari</i> | G934 |
| Organic cation transport by rat hepatocyte basolateral membrane vesicles <i>T. D. McKinney and M. A. Hosford</i> | G939 |
| Serum complement mediates endotoxin-induced cysteinyl leukotriene formation in rats in vivo <i>H. Jaeschke, M. J. Raftery, U. Justesen, and S. J. Gaskell</i> | G947 |
| Myogenic mechanism for peristalsis in opossum smooth muscle esophagus <i>J. F. Helm, S. L. Bro, W. J. Dodds, S. K. Sarna, and R. G. Hoffmann</i> | G953 |
| L-Glutamine with D-glucose stimulates oxidative metabolism and NaCl absorption in piglet jejunum <i>J. M. Rhoads, E. O. Keku, J. P. Woodard, S. I. Bangdiwala, J. G. Lecce, and J. T. Gatzky</i> | G960 |

RAPID COMMUNICATION

| | |
|---|------|
| Characterization of H ₂ histamine receptor: linkage to both adenylate cyclase and [Ca ²⁺] _i signaling systems <i>J. DelValle, L. Wang, I. Gantz, and T. Yamada</i> | G967 |
|---|------|

| | |
|-----------------------------------|------|
| <i>Subject Index to Volume 26</i> | G973 |
| <i>Author Index to Volume 26</i> | G981 |

American Journal of Physiology: Lung Cellular and Molecular Physiology

No. 1. JULY 1992

INVITED REVIEW

- Chloride channels in the apical membrane of normal and cystic fibrosis airway and intestinal epithelia
M. P. Anderson, D. N. Sheppard, H. A. Berger, and M. J. Welsh L1
-
- In vitro responses of ovine intrapulmonary arteries and veins to endothelin-1
H. Toga, B. O. Ibe, and J. U. Raj L15
- IL-6 enhances TNF- α - and IL-1-induced increase of Mn superoxide dismutase mRNA and O₂ tolerance
M.-F. Tsan, J. E. White, P. J. Del Vecchio, and J. B. Shaffer L22
- Restricted diffusion of macromolecules by endothelial monolayers and small-pore filters
R. C. Schaeffer, Jr., F. Gong, and M. S. Bitrick, Jr. L27
- Formation of alveoli in rats: postnatal effect of prenatal dexamethasone
G. D. Massaro and D. Massaro L37
- Stimulation of phosphatidylcholine hydrolysis in type II alveolar epithelial cells
L. C. Dubrovin and L. A. S. Brown L42
- Superoxide responses of endothelial cells to C5a and TNF- α : divergent signal transduction pathways
H. S. Murphy, J. A. Shayman, G. O. Till, M. Mahrougui, C. B. Owens, U. S. Ryan, and P. A. Ward L51
- Surfactant protein D: subcellular localization in nonciliated bronchiolar epithelial cells
E. Crouch, D. Parghi, S.-F. Kuan, and A. Persson L60
- Tobacco smoke releases preformed mediators from canine mast cells and modulates prostaglandin production
P. S. Thomas, R. E. Schreck, and S. C. Lazarus L67
- Pulmonary arterial hypoxic contraction: signal transduction
N. Jin, C. S. Packer, and R. A. Rhoades L73
- Selective induction of intercellular adhesion molecule-1 by interferon- γ in human airway epithelial cells
D. C. Look, S. R. Rapp, B. T. Keller, and M. J. Holtzman L79
- Chronic hypoxia selectively augments rat pulmonary artery Ca²⁺ and K⁺ channel-mediated relaxation
D. M. Rodman L88
- Processing of surfactant protein B proprotein by a cathepsin D-like protease
T. E. Weaver, S. Lin, B. Bogucki, and C. Dey L95
- Staphylococcus aureus* α -toxin permeabilizes the basolateral membrane of a Cl⁻-secreting epithelium
L. S. Ostedgaard, D. M. Shasby, and M. J. Welsh L104
- Endothelial cGMP does not regulate basal release of endothelium-derived relaxing factor in culture
N. Marczin, U. S. Ryan, and J. D. Catravas L113
- Intracellular Ca²⁺ and regulation of ion transport across rabbit Clara cells
M. R. Van Scott and A. M. Paradiso L122
- Interleukin-1 α and - β augment pulmonary artery transendothelial albumin flux in vitro
W. N. Campbell, X. Ding, and S. E. Goldblum L128
- Bioassay of a tracheal smooth muscle-constricting factor released by respiratory epithelial cells
J. H. Wilkens, A. Becker, H. Wilkens, M. Emura, M. Riebe-Imre, K. Plein, S. Schöber, D. Tsikas, F. M. Gutzki, and J. C. Frölich L137

RAPID COMMUNICATIONS

- Direct measurement of acetylcholine release in guinea pig trachea
D. G. Baker, H. F. Don, and J. K. Brown L142

BOOKSHELF L148

No. 2. AUGUST 1992

INVITED REVIEW

- Surfactant protein C: a review of its unique properties and metabolism
M. F. Beers and A. B. Fisher L151

-
- Cigarette smoke-induced airway goblet cell secretion: dose-dependent differential nerve activation
H.-P. Kuo, J. A. L. Rohde, P. J. Barnes, and D. F. Rogers L161
- Prostaglandin D₂ production and identification of prostaglandin H synthase within canine mast cell granule
P. S. Thomas, A. N. Wilson, R. E. Schreck, and S. C. Lazarus L168
- Structural and functional impairment of surfactant protein A after exposure to nitrogen dioxide in rats
B. Müller, P. Barth, and P. von Wichert L177
- Spontaneous production of PDGF A-chain homodimer by rat lung fibroblasts in vitro
J. P. Fabisiak, M. Absher, J. N. Evans, and J. Kelley L185
- L-Arginine restores endothelium-dependent relaxation in pulmonary circulation of chronically hypoxic rats
S. Eddahibi, S. Adnot, C. Carville, Y. Blouquit, and B. Raffestin L194
- Localization of alveolar surfactant clearance in rabbit lung cells
E. D. Rider, M. Ikegami, and A. H. Jobe L201
- Pulmonary SP-A enhances adsorption and appears to induce surface sorting of lipid extract surfactant
S. Schürch, F. Possmayer, S. Cheng, and A. M. Cockshutt L210
- Time course of thrombin-induced increase in endothelial permeability: relationship to Ca²⁺ and inositol polyphosphates
H. Lum, J. L. Aschner, P. G. Phillips, P. W. Fletcher, and A. B. Malik L219
- Bronchial epithelial cells release neutrophil chemotactic activity in response to tachykinins
S. G. Von Essen, S. I. Rennard, D. O'Neill, R. F. Ertl, R. A. Robbins, S. Koyama, and I. Rubinstein L226
- Control of the beat cycle of respiratory tract cilia by Ca²⁺ and cAMP
A. B. Lansley, M. J. Sanderson, and E. R. Dirksen L232
- Filter paper equilibration as a novel technique for in vitro studies of the composition of airway surface fluid
L. Joris and P. M. Quinton L243
- Generation of the neutrophil-activating peptide-2 by cathepsin G and cathepsin G-treated human platelets
A. B. Cohen, M. D. Stevens, E. J. Miller, M. A. L. Atkinson, and G. Mullenbach L249
- Influences of endogenous and exogenous TGF- β on elastin in rat lung fibroblasts and aortic smooth muscle cells
S. E. McGowan L257
- Cat tracheal gland cells in primary culture
D. J. Culp, D. K. P. Lee, D. P. Penney, and M. G. Marin L264
- IGF-I regulation of elastogenesis: comparison of aortic and lung cells
C. B. Rich, D. Z. Ewton, B. M. Martin, J. R. Florini, M. Bashir, J. Rosenbloom, and J. A. Foster L276

| | |
|--|------|
| Differential collagen and fibronectin production by Thy 1 ⁺ and Thy 1 ⁻ lung fibroblast subpopulations <i>S. Derdak, D. P. Penney, P. Keng, M. E. Felch, D. Brown, and R. P. Phipps</i> | L283 |
| Surfactant proteins and lipids are regulated independently during hyperoxia <i>P. Minoo, R. J. King, and J. J. Coalson</i> | L291 |

No. 3. SEPTEMBER 1992

COMMENTARY

| | |
|--|------|
| CFU-rAM, the origin of lung macrophages, and the macrophage lineage <i>S. P. Sorokin, N. A. McNelly, and R. F. Hoyt, Jr.</i> | L299 |
| <hr/> | |
| A novel system for the culture of human lung: lung development and the response to injury <i>M.-T. Hsu, M. DiMaio, O. K. Reiss, D. Ciurea, and J. Gil</i> | L308 |
| Role of endothelin-1 in regulating proliferation of cultured rabbit airway smooth muscle cells <i>J. P. Noveral, S. M. Rosenberg, R. A. Anbar, N. A. Pawlowski, and M. M. Grunstein</i> | L317 |
| Chronic hypoxia impairs soluble guanylyl cyclase-mediated pulmonary arterial relaxation in the rat <i>D. E. Crawley, L. Zhao, M. A. Gienbycz, S. Liu, P. J. Barnes, R. J. D. Winter, and T. W. Evans</i> | L325 |
| Binding and uptake of surfactant protein B by alveolar type II cells <i>S. R. Bates, M. F. Beers, and A. B. Fisher</i> | L333 |
| Kinetics of pulmonary superoxide dismutase in interleukin-1-induced oxygen-tolerant rats <i>M.-F. Tsan and J. E. White</i> | L342 |
| Alveolar type II cells synthesize hydrophobic cell-associated proteoglycans with multiple core proteins <i>W. M. Maniscalco and M. H. Campbell</i> | L348 |
| Effect of food restriction on hyperoxia-induced lung injury in preterm guinea pig <i>S. C. Langley and F. J. Kelly</i> | L357 |
| Atriopeptin-induced increases in endothelial cell permeability are associated with elevated cGMP levels <i>M. Yonemaru, K. Ishii, F. Murad, and T. A. Raffin</i> | L363 |
| Oxygen affects human endothelial cell proliferation by inactivation of fibroblast growth factors <i>M. M. Grant, H.-C. Koo, and W. Rosenfeld</i> | L370 |
| Stimulation of fetal rat lung cell proliferation in vitro by mechanical stretch <i>M. Liu, S. J. M. Skinner, J. Xu, R. N. N. Han, A. K. Tanswell, and M. Post</i> | L376 |
| Effects of hypoxia and other vasoactive agents on pulmonary and cerebral artery smooth muscle cells <i>J. A. Madden, M. S. Vadula, and V. P. Kurup</i> | L384 |
| Circulating xanthine oxidase mediates lung neutrophil sequestration after intestinal ischemia-reperfusion <i>L. S. Terada, J. J. Dormish, P. F. Shanley, J. A. Leff, B. O. Anderson, and J. E. Repine</i> | L394 |
| Effects of hydrogen peroxide on the responsiveness of isolated canine bronchi: role of prostaglandin E ₂ and I ₂ <i>Y. Gao and P. M. Vanhoutte</i> | L402 |

BOOKSHELF

L409

INVITED REVIEW

Mucins: structure, function, and role in pulmonary diseases

M. C. Rose

L413

H₂O₂ injury causes Ca²⁺-dependent and -independent hydrolysis of phosphatidylcholine in alveolar epithelial cells

K. L. Rice, P. G. Duane, S. L. Archer, D. P. Gilboe, and D. E. Niewoehner

L430

Respiratory activity of lung mitochondria isolated from oxygen-exposed rats

D. J. P. Bassett, C. L. Elbon, and S. S. Reichenbaugh

L439

Intact lung cytochrome P-450 is not required for hypoxic pulmonary vasoconstriction

S.-W. Chang, D. Dutton, H.-L. Wang, L.-S. He, R. Stearns, A. Hui,

K. M. Giacomini, P. Oritz de Montellano, and N. F. Voelkel

L446

Influence of growth oxygen level on eicosanoid release from lung endothelial cells during hypoxia

W. E. Holden, E. M. Burnham, M. A. Lee, and S. P. Bagby

L454

Expression of aminopeptidase N in fetal rat lung during development

X. Jiang, S. Tangada, R. D. A. Peterson, and J. D. Funkhouser

L460

Rat lung antioxidant enzymes: differences in perinatal gene expression and regulation

L. B. Clerch and D. Massaro

L466

Cigarette smoking decreases bioactive interleukin-6 secretion by alveolar macrophages

D. M. Soliman and H. L. Twigg, III

L471

Intracellular processing of pulmonary surfactant protein B in an endosomal/lysosomal compartment

W. F. Voorhout, T. Veenendaal, H. P. Haagsman, T. E. Weaver, J. A. Whitsett,

L. M. G. van Golde, and H. J. Geuze

L479

Mechanisms of fibrin formation and lysis by human lung fibroblasts: influence of TGF- β and TNF- α

S. Idell, C. Zwieb, J. Boggaram, D. Holiday, A. R. Johnson, and G. Raghu

L487

Differential effect of platelet-derived growth factor on glycosaminoglycan synthesis by fetal rat lung cells

I. Caniggia and M. Post

L495

RAPID COMMUNICATION

Maturation of inositol 1,4,5-trisphosphate receptor binding in rabbit tracheal smooth muscle

C. M. Schramm, S. T. Chuang, and M. M. Grunstein

L501

BOOKSHELF

L506

Role of surface complexed iron in oxidant generation and lung inflammation induced by silicates

A. J. Ghio, T. P. Kennedy, A. R. Whorton, A. L. Crumbliss,

G. E. Hatch, and J. R. Hoidal

L511

Sodium- and chloride-conductive pathways in cultured mouse tracheal epithelium

L. L. Clarke, K. A. Burns, J.-Y. Bayle, R. C. Boucher, and M. R. Van Scott

L519

Differential systemic and intrapulmonary TNF- α production in *Candida* sepsis during immunosuppression

A. J. Lechner, T. L. Tredway, D. S. Brink, C. A. Klein, and G. M. Matuschak

L526

Expression and regulation of human pulmonary fibroblast-derived monocyte chemotactic peptide-1

M. W. Rolfe, S. L. Kunkel, T. J. Standiford, M. B. Orringer, S. H. Phan,

H. L. Evanoff, M. D. Burdick, and R. M. Strieter

L536

| | |
|--|------|
| Murine pulmonary surfactant SP-A gene: cloning, sequence, and transcriptional activity <i>T. R. Korfhagen, M. D. Bruno, S. W. Glasser, P. J. Ciraolo, J. A. Whitsett, D. L. Lattier, K. A. Wikenheiser, and J. C. Clark</i> | L546 |
| Role and mechanism of thromboxane-induced proliferation of cultured airway smooth muscle cells <i>J. P. Noveral and M. M. Grunstein</i> | L555 |
| Insulin inhibits β -adrenergic responses in fetal rabbit lung in explant culture <i>D. J. Davis, J. M. Hickman, C. A. Lefebvre, and M. E. Lyon</i> | L562 |
| Characteristics of magnetically separated rat tracheal epithelial cell populations <i>J. R. Ford and M. Terzaghi-Howe</i> | L568 |
| Methylene blue inhibits neurogenic cholinergic vasodilator responses in the pulmonary vascular bed of the cat <i>T. J. McMahon and P. J. Kadowitz</i> | L575 |
| Quantitation of alveolar distribution of liposome-entrapped antioxidant enzymes <i>R. R. Baker, L. Czopf, T. Jilling, B. A. Freeman, K. L. Kirk, and S. Matalon</i> | L585 |
| Thrombin receptor 14-amino acid peptide binds to endothelial cells and stimulates calcium transients <i>C. Tiruppathi, H. Lum, T. T. Andersen, J. W. Fenton II, and A. B. Malik</i> | L595 |
| Stretching increases calcium influx and efflux in cultured pulmonary arterial smooth muscle cells <i>R. A. Bialecki, T. J. Kulik, and W. S. Colucci</i> | L602 |
| Surfactant protein C is recycled from the alveoli to the lamellar bodies <i>A. Baritussio, A. Pettenazzo, M. Benevento, A. Alberti, and P. Gamba</i> | L607 |
| Pathways for glucose transport in type II pneumocytes freshly isolated from adult guinea pig lung <i>P. J. Kemp and C. A. R. Boyd</i> | L612 |

No. 6. DECEMBER 1992

COMMENTARY

| | |
|---|------|
| Quantitative assessment of epithelial lining fluid in the lung <i>F. P. Chinard</i> | L617 |
| Kinetics of urea exchange in air-filled and fluid-filled rat lungs <i>R. M. Effros, C. Murphy, K. Ozker, and A. Hacker</i> | L619 |
| Influence of extracellular matrix in tumor necrosis factor-induced increase in endothelial permeability <i>C. A. Partridge, C. J. Horvath, P. J. Del Vecchio, P. G. Phillips, and A. B. Malik</i> | L627 |
| Rabbit surfactant protein C: cDNA cloning and regulation of alternatively spliced surfactant protein C mRNAs <i>V. Boggaram and R. K. Margana</i> | L634 |
| Stimulation of bovine pulmonary artery endothelial cell ACE by dexamethasone: involvement of steroid receptors <i>Y. Dasarthy, J. J. Lanzillo, and B. L. Fanburg</i> | L645 |
| PMA-activated neutrophils decrease pulmonary endothelial ectoenzyme activities in perfused rabbit lungs <i>X. Chen and J. D. Catravas</i> | L650 |
| PMA-activated neutrophils decrease ectoenzyme activities in rabbit aortic endothelial cells in culture <i>X. Chen, M. Tzanela, M. K. Baumgartner, J. R. McCormick, and J. D. Catravas</i> | L657 |
| Histamine, actin-gelsolin binding, and polyphosphoinositides in human umbilical vein endothelial cells <i>M. R. Carson, S. S. Shasby, S. E. Lind, and D. M. Shasby</i> | L664 |
| Platelets and a platelet-released factor enhance endothelial barrier <i>F. R. Haselton and J. S. Alexander</i> | L670 |
| Immunolocalization of antioxidant enzymes and isozymes of glutathione S-transferase in normal rat lung <i>D. B. Coursin, H. P. Cihla, T. D. Oberley, and L. W. Oberley</i> | L679 |

| | |
|--|------|
| CFTR channels in immortalized human airway cells <i>C. Haws, M. E. Krouse, Y. Xia, D. C. Gruenert, and J. J. Wine</i> | L692 |
| Interleukin-8 induces neutrophil accumulation but not protease secretion in the canine trachea <i>P. G. Jorens, J. B. Y. Richman-Eisenstat, B. P. Housset, P. D. Graf, I. F. Ueki, J. Olesch, and J. A. Nadel</i> | L708 |
| Mechanism of H ₂ O ₂ -induced modulation of airway smooth muscle <i>J. B. Gupta and K. Prasad</i> | L714 |
| Effect of an anti-Mo1 MAb on ozone-induced airway inflammation and airway hyperresponsiveness in dogs <i>Z. Li, E. E. Daniel, C. G. Lane, M. A. Arnaout, and P. M. O'Byrne</i> | L723 |
| BOOKSHELF | L727 |
| <i>Subject Index to Volume 7</i> | L731 |
| <i>Author Index to Volume 7</i> | L737 |

CORRIGENDA

Volume 262, February 1992

Volume 6, February 1992

Pages L198-L207: Nicoletta De Marzo, David L. Sloane, Sherry Dicharry, Ella Highland, and Elliott Sigal. "Cloning and expression of an airway epithelial 12-lipoxygenase." Page L202, Fig. 3, nucleotide sequence 1321-1380 should read:

TCCTTCTGTCCCCCTGATGACCTGGCTGAC
CGGGGGCTCCTGGGAGTCAAGTCTTCTTTC

The deduced amino acid sequence for this region in Figs. 3 and 7 is correct. Also, the nucleotide sequence submitted to GenBank (accession number M62516) is correct.

Volume 263, July 1992

Volume 7, July 1992

Pages L37-L41: Gloria D. Massaro and Donald Massaro. "Formation of alveoli in rats: postnatal effect of prenatal dexamethasone." Page L39: In Table 7 the values for the number of saccules or alveoli per rat should be $\times 10^{-6}$, not $\times 10^6$. The corrected table appears below.

Table 7. *Dexamethasone on gestation days 17-19: average volume and number of saccules and alveoli*

| Treatment | Sex | n | Age, days | $\bar{v}, \mu\text{m}^3 \times 10^{-4}$ | $N, \times 10^{-6}$ |
|-----------|-----|---|-----------|---|---------------------|
| Diluent | M | 3 | 2 | 19.7 \pm 3.5 | 1.03 \pm 0.17 |
| Dex | M | 3 | 2 | 19.8 \pm 2.5 | 1.04 \pm 0.23 |
| <i>P</i> | | | | NS | NS |
| Diluent | F | 4 | 14 | 3.37 \pm 0.18 | 23.0 \pm 1.4 |
| Dex | F | 4 | 14 | 3.75 \pm 0.23 | 16.0 \pm 1.9 |
| <i>P</i> | | | | NS | <0.05 |

Values are means \pm SE; *n*, no. of rats. Legend as in Table 4. \bar{v} , volume of an average saccule or alveolus; *N*, no. of saccules or alveoli/rat.

Pages L219-L225: Hazel Lum, Judy L. Aschner, Patricia G. Phillips, Paul W. Fletcher, and Asrar B. Malik. "Time course of thrombin-induced increase in endothelial permeability: relationship to Ca_i^{2+} and inositol polyphosphates." Page L222: the first duration after control should be 0.5 min. The corrected table appears below.

Table 1. *F-actin content following α -thrombin treatment*

| Duration of α -Thrombin (10^{-7} M) Treatment | % F-Actin/Total Protein | <i>n</i> |
|---|-------------------------|----------|
| Control | 13.98 \pm 1.4 | 12 |
| 0.5 min | 16.85 \pm 1.7 | 9 |
| 1 min | 25.55 \pm 1.9* | 2 |
| 5 min | 23.32 \pm 2.7* | 10 |

Values are means \pm SE; *n*, no. of monolayers analyzed. Triton X-100 insoluble cell extracts were prepared for SDS-PAGE analysis (see METHODS) and protein bands quantified by laser densitometry. The peak area for F-actin was normalized to total protein and reported as percent of total protein. * $P < 0.01$.

American Journal of Physiology: Heart and Circulatory Physiology

No. 1. JULY 1992

| | |
|--|------|
| Intracellular recording and dye transfer in arterioles during blood flow control <i>S. S. Segal and J.-L. Bény</i> | H1 |
| Role of endothelium-derived nitric oxide in myocardial reactive hyperemia <i>H. Yamabe, K. Okumura, H. Ishizaka, T. Tsuchiya, and H. Yasue</i> | H8 |
| Kinetic characteristics of α_1 -adrenergic contractions in human corpus cavernosum smooth muscle <i>G. J. Christ, C. B. Schwartz, B. A. Stone, M. Parker, M. Janis, M. Gondre, M. Valcic, and A. Melman</i> | H15 |
| An animal model of chronic coronary stenosis resulting in hibernating myocardium <i>H. Bolukoglu, A. J. Liedtke, S. H. Nellis, A. M. Eggleston, R. Subramanian, and B. Renstrom</i> | H20 |
| Isometric biaxial tension of smooth muscle in isolated cylindrical segments of rabbit arteries <i>K. Takamizawa, K. Hayashi, and T. Matsuda</i> | H30 |
| Oxygen diffusion in hamster striated muscle: comparison of in vitro and near in vivo conditions <i>H. Meng, T. B. Bentley, and R. N. Pittman</i> | H35 |
| Regulation of extracellular adenosine production by ectonucleotidases of adult rat ventricular myocytes <i>P. Meghji, J. D. Pearson, and L. L. Slakey</i> | H40 |
| Quantitation of specific binding of orosomucoid to cultured microvascular endothelium: role in capillary permeability <i>J. E. Schnitzer and E. Pinney</i> | H48 |
| Comparison of norepinephrine and isoproterenol clearance in congestive heart failure <i>U. Leuenberger, G. Kenney, D. Davis, B. Clemson, and R. Zelis</i> | H56 |
| cGMP pathway and mechanical properties of carotid artery wall in WKY rats and SHR: role of endothelium <i>M. C. Mourlon-Le Grand, J. Benessiano, and B. I. Levy</i> | H61 |
| Altered agonist-induced Ca^{2+} mobilization in aortic smooth muscle cells from cardiomyopathic hamsters <i>Y. Tawada-Iwata, K.-I. Furukawa, T. Ogurusu, H. Nakamura, and M. Shigekawa</i> | H68 |
| Cerebral blood flow, blood volume, and brain tissue hematocrit during isovolemic hemodilution with hetastarch in rats <i>M. M. Todd, J. B. Weeks, and D. S. Warner</i> | H75 |
| Catecholamines in cerebrospinal fluid are increased by behavioral arousal and myocardial ischemia <i>D. A. Johnson, J. M. B. Pinto, D. A. Kirby, and B. Lown</i> | H83 |
| Effects of mechanical vibration on left ventricular diastolic properties during global ischemia <i>J.-I. Kikuchi, Y. Koiwa, T. Takagi, H. Honda, N. Hoshi, J. P. Butler, and T. Takishima</i> | H88 |
| Oxidant stress alters Na^+ pump and $\text{Na}^+-\text{K}^+-\text{Cl}^-$ cotransporter activities in vascular endothelial cells <i>S. J. Elliott and W. P. Schilling</i> | H96 |
| Modulation of NO and endothelin by chronic increases in blood flow in canine femoral arteries <i>V. M. Miller and J. C. Burnett, Jr.</i> | H103 |
| Effect of changing afterload and inotropic states on inner and outer ventricular wall thickening <i>M. Matsuzaki, N. Tanaka, Y. Toma, T. Miura, K. Katayama, M. Ozaki, S. Ono, M. Yano, M. Kohno, and R. Kusukawa</i> | H109 |
| Long-term coronary stenosis in rats: cardiac performance, myocardial morphology and contractile protein enzyme activity <i>P. Anversa, A. Malhotra, X. Zhang, P. Li, J. Scheuer, and J. M. Capasso</i> | H117 |

| | |
|---|------|
| Influence of pericardial constraint on atrioventricular interactions <i>S. Beloucif, M. Takata, M. Shimada, and J. L. Robotham</i> | H125 |
| Regional contractile performance during acute ischemia in porcine right ventricle <i>E. Chow, L. Foppiano, and D. J. Farrar</i> | H135 |
| Role of cGMP mechanisms in response of rat pulmonary arteries to hypoxia <i>R. Mathew, H. A. Omar, P. D. Cherry, M. H. Gewitz, and M. S. Wolin</i> | H141 |
| Removal of sarcolemmal sialic acid residues results in a loss of sarcolemmal functioning and integrity <i>J. A. Post</i> | H147 |
| Dynorphin, naloxone, and overflow of norepinephrine during cardiac nerve stimulation in dogs <i>H. Gu, B. A. Barron, J. F. Gaugl, and J. L. Caffrey</i> | H153 |
| Chemoreceptor responsiveness in fetal sheep <i>P. F. Boekkooi, J. Baan, Jr., D. Teitel, and A. M. Rudolph</i> | H162 |
| Regional distribution of ECS in contractile and conductive elements of rat and rabbit heart <i>K. G. Lurie, J. Dutton, and P. Wiegand</i> | H168 |
| Sodium and left ventricular mass in untreated hypertensive and normotensive subjects <i>G. du Cailar, J. Ribstein, J.-P. Daures, and A. Mimran</i> | H177 |
| Comparable sensitivity of flow contraction and relaxation to Na reduction may reflect flow-sensor characteristics <i>J. A. Bevan and E. H. Joyce</i> | H182 |
| Uterine prostaglandin production in ovine pregnancy: effects of angiotensin II and indomethacin <i>R. R. Magness, C. R. Rosenfeld, D. J. Faucher, and M. D. Mitchell</i> | H188 |
| Lower brain stem controls cardiac ANF secretion <i>J.-H. Jiao, P. G. Guyenet, and A. J. Baertschi</i> | H198 |
| Oxygen transport during anemic hypoxia in pigs: effects of digoxin on metabolism <i>A. Saltiel, D. J. Sanfilippo, R. Hendler, and G. Lister</i> | H208 |
| Contribution of adenosine to isoproterenol-stimulated prostacyclin production in rabbit heart <i>C. Cano, Z. Qureshi, S. Carter, and K. U. Malik</i> | H218 |
| Left ventricular diastolic and systolic performance during chronic experimental aortic regurgitation <i>N. M. Magid, D. C. Wallerson, J. S. Borer, A. Mukherjee, M. S. Young, R. B. Devereux, and J. N. Carter</i> | H226 |
| Analysis of pulmonary and systemic vascular responses to platelet-activating factor in the cat <i>J. A. Bellan, R. K. Minkes, J. S. Hood, T. J. McMahon, T. R. Higuera, B. D. Nossaman, D. B. McNamara, and P. J. Kadowitz</i> | H234 |
| Entry rate and metabolism of leukotriene C ₄ into vascular compartment in healthy subjects <i>J. MacIouf, C. Antoine, R. De Caterina, R. Sicari, R. C. Murphy, P. Patrignani, S. Loizzo, and C. Patrono</i> | H244 |
| Angiotensin II receptor antagonism in ovine heart failure: acute hemodynamic, hormonal, and renal effects <i>M. A. Fitzpatrick, M. T. Rademaker, C. J. Charles, T. G. Yandle, E. A. Espiner, and H. Ikram</i> | H250 |
| Regulation of spontaneous EDRF release in diabetic rat aorta by oxygen free radicals <i>P. Langenstroer and G. M. Pieper</i> | H257 |
| Left ventricular shape changes during the course of evolving heart failure <i>H. N. Sabbah, T. Kono, P. D. Stein, G. B. J. Mancini, and S. Goldstein</i> | H266 |
| Acute effect of 17 β -estradiol on rabbit coronary artery contractile responses to endothelin-1 <i>C. Jiang, P. M. Sarrel, P. A. Poole-Wilson, and P. Collins</i> | H271 |

SPECIAL COMMUNICATIONS

- Cytosolic pH measurements in single cardiac myocytes
using carboxy-seminaphthorhodafluor-1
*P. S. Blank, H. S. Silverman, O. Y. Chung, B. A. Hogue, M. D. Stern,
R. G. Hansford, E. G. Lakatta, and M. C. Capogrossi* H276
- Laser-Doppler flowmetry in monitoring regulation of rapid microcirculatory changes
in spinal cord
*P. J. Lindsberg, T. P. Jacobs, K. U. Frerichs,
J. M. Hallenbeck, and G. Z. Feuerstein* H285
- A method to reconstruct myocardial sarcomere lengths and orientations at transmural
sites in beating canine hearts
*E. K. Rodriguez, W. C. Hunter, M. J. Royce, M. K. Leppo,
A. S. Douglas, and H. F. Weisman* H293
- How to encode arterial pressure into carotid sinus nerve to invoke natural baroreflex
T. Kubota, H. Chishaki, T. Yoshida, K. Sunagawa, A. Takeshita, and Y. Nose H307

ANNOUNCEMENTS

H314

No. 2. AUGUST 1992

- Venous myogenic tone: studies in human and canine vessels
*V. Bérczi, A. S. Greene, G. Dörnyei, J. Csengődy, G. Hódi,
A. Kádár, and E. Monos* H315
- Free radicals mediate endothelial cell dysfunction caused by elevated glucose
B. Tesfamariam and R. A. Cohen H321
- Initiation and development of calcium waves in rat myocytes
N. Ishide, M. Miura, M. Sakurai, and T. Takishima H327
- Role of Na-activated K channel, Na-K-Cl cotransport, and Na-K pump in $[K]_e$ changes
during ischemia in rat heart
A. Mitani and M. J. Shattock H333
- Effects of allopurinol on reperfusion arrhythmias in isolated ventricles
G.-R. Li and G. R. Ferrier H341
- Platelet amplification of vasospasm
A. S. Weyrich, G. A. Solis, K. S. Li, T. N. Tulenko, and W. P. Santamore H349
- Role of endothelium and hyperpolarization in CGRP-induced vasodilation
of rabbit ophthalmic artery
A. Zschauer, H. Uusitalo, and J. E. Brayden H359
- Calmodulin stimulation of smooth muscle plasmalemmal vesicle Ca^{2+} uptake: direct
or indirect effect?
C. Zhang, R. J. Paul, and E. G. Kranias H366
- Effects of exercise training on vasomotor reactivity of porcine coronary arteries
C. L. Oltman, J. L. Parker, H. R. Adams, and M. H. Laughlin H372
- Almitrine mimics hypoxic vasoconstriction in isolated rat lungs
E. B. Gottschall, S. Fernyak, G. Wuertemberger, and N. F. Voelkel H383
- Effect of superoxide dismutase and catalase on regional dysfunction
after exercise-induced ischemia
*D. C. Homans, R. Asinger, T. Pavek, M. Crampton, P. Lindstrom,
D. Peterson, and R. J. Bache* H392
- Glibenclamide decreases basal coronary blood flow in anesthetized dogs
*Y. Imamura, H. Tomoike, T. Narishige, T. Takahashi,
H. Kasuya, and A. Takeshita* H399
- Hemodynamic and proteolytic effects of intravenous injection of purified
human plasma kallikrein
F. Naess, O. Roeise, H. T. Johansen, J. O. Stadaas, and A. O. Aasen H405
- Influence of long-chain acylcarnitines on voltage-dependent calcium current
in adult ventricular myocytes
J. Wu and P. B. Corr H410

| | |
|--|------|
| Metabolism of angiotensin I by different tissues in the intact animal <i>A. H. J. Danser, M. M. G. Koning, P. J. J. Admiraal, F. H. M. Derkx, P. D. Verdouw, and M. A. D. H. Schalekamp</i> | H418 |
| Production of angiotensins I and II at tissue sites in intact pigs <i>A. H. J. Danser, M. M. G. Koning, P. J. J. Admiraal, L. M. A. Sassen, F. H. M. Derkx, P. D. Verdouw, and M. A. D. H. Schalekamp</i> | H429 |
| Synthesis and transport of lipoprotein lipase in perfused guinea pig hearts <i>G. Liu and T. Olivecrona</i> | H438 |
| Dynamic response of coronary regulation to heart rate and perfusion changes in dogs <i>J. Dankelman, I. Vergroesen, Y. Han, and J. A. E. Spaan</i> | H447 |
| Characteristics of calcium currents in rabbit portal vein myocytes <i>R. H. Cox, D. Katzka, and M. Morad</i> | H453 |
| Sliding velocity of isolated rabbit cardiac myosin correlates with isozyme distribution <i>H. Yamashita, S. Sugiura, T. Serizawa, T. Sugimoto, M. Iizuka, E. Katayama, and T. Shimmen</i> | H464 |
| Catecholamine-mediated lymphatic constriction: involvement of both α_1 - and α_2 -adrenoreceptors <i>D. E. Dobbins</i> | H473 |
| Control of ventricular fibrillation after coronary artery occlusion via intracerebroventricular injections <i>D. A. Kirby, D. A. Johnson, J. Pinto, S. Zhao, and B. Lown</i> | H479 |
| Retrograde coronary flow is limited by time-varying elastance <i>E. Kouwenhoven, I. Vergroesen, Y. Han, and J. A. E. Spaan</i> | H484 |
| Vasopressin modulates K^+ -channel activities of cultured smooth muscle cells from porcine coronary artery <i>T. Wakatsuki, Y. Nakaya, and I. Inoue</i> | H491 |
| NMR visibility of P_i in perfused rat hearts is affected by changes in substrate and contractility <i>P. B. Garlick and R. M. Townsend</i> | H497 |
| Cellular basis of negative inotropic effect of 2,3-butanedione monoxime in human myocardium <i>C. L. Perreault, L. A. Mulieri, N. R. Alpert, B. J. Ransil, P. D. Allen, and J. P. Morgan</i> | H503 |
| Acute hypertension and sympathetic stimulation: local heterogeneous changes in cerebral blood flow <i>U. I. Tuor</i> | H511 |
| Mechanism of action of cerebral epoxyeicosatrienoic acids on cerebral arterial smooth muscle <i>D. Gebremedhin, Y.-H. Ma, J. R. Falck, R. J. Roman, M. VanRollins, and D. R. Harder</i> | H519 |
| ATP formation and energy demand in anoxic heart muscle of the rabbit <i>D. L. L. Dietrich and G. Elzinga</i> | H526 |
| Pial vessel caliber and cerebral blood flow become dissociated during ischemia-reperfusion in cats <i>E. Tasdemiroglu, R. Macfarlane, E. P. Wei, H. A. Kontos, and M. A. Moskowitz</i> | H533 |
| Peroxide inactivates calcium pumps in pig coronary artery <i>A. K. Grover, S. E. Samson, and V. P. Fomin</i> | H537 |
| Characteristics and development of myocardial stunning in the pig <i>G. Aksnes, K. A. Kirkebøen, G. Christensen, and A. Ilebekk</i> | H544 |
| Interstitial adenosine with dipyridamole: effect of adenosine receptor blockade and adenosine deaminase <i>T. Wang, R. M. Mentzer, Jr., and D. G. L. Van Wylen</i> | H552 |
| Effects of arterial hypertension on myocardial recovery after ischemic injury <i>J. R. Elbeery, R. F. Williams, J. S. Rankin, D. D. Glower, D. C. Sabiston, Jr., and P. Van Trigt</i> | H559 |
| Focal cortical distribution of blood flow and brain pH, determined by in vivo fluorescent imaging <i>R. E. Anderson, F. B. Meyer, and F. H. Tomlinson</i> | H565 |

| | |
|---|------|
| Agonist-induced $[Ca^{2+}]_i$ waves and Ca^{2+} -induced Ca^{2+} release in mammalian vascular smooth muscle cells <i>L. A. Blatter and W. G. Wier</i> | H576 |
| Effect of methylene blue on vasoreactivity in dog lung <i>W. F. Hofman, H. A. El-Kashef, J. Endrédi, and I. C. Ehrhart</i> | H587 |
| Time-varying wall stress: an index of ventricular vascular coupling <i>L. J. Dell'Italia, G. G. Blackwell, B. T. Thorn, D. J. Pearce, S. P. Bishop, and G. M. Pohost</i> | H597 |
| Platelet cGMP, but not cAMP, inhibits thrombin-induced platelet adhesion to pulmonary vascular endothelium <i>C. M. Venturini, L. K. Weston, and J. E. Kaplan</i> | H606 |
| Stretch-induced depolarizations as a trigger of arrhythmias in isolated canine left ventricles <i>G. P. Stacy, Jr., R. L. Jobe, L. K. Taylor, and D. E. Hansen</i> | H613 |
| Magnesium affects excitation, conduction, and contraction of isolated mammalian cardiac muscle <i>S. K. Hall and C. H. Fry</i> | H622 |
| Inhibition of bovine retinal microvascular pericyte proliferation in vitro by adenosine <i>J. A. Jackson and E. C. Carlson</i> | H633 |

RAPID COMMUNICATION

| | |
|---|------|
| Flow modulates coronary venular permeability by a nitric oxide-related mechanism <i>Y. Yuan, H. J. Granger, D. C. Zawieja, and W. M. Chilian</i> | H641 |
|---|------|

No. 3. SEPTEMBER 1992

BRIEF REVIEW

| | |
|--|------|
| Cellular mechanisms involved in the vascular myogenic response <i>G. A. Meininger and M. J. Davis</i> | H647 |
|--|------|

| | |
|--|------|
| Effects of a novel prostaglandin, 8-epi-PGF _{2α} , in rabbit lung in situ <i>M. Banerjee, K. H. Kang, J. D. Morrow, L. J. Roberts, and J. H. Newman</i> | H660 |
| Salt intake and angiotensin II alter microvessel density in the cremaster muscle of normal rats <i>I. Hernandez, A. W. Cowley, Jr., J. H. Lombard, and A. S. Greene</i> | H664 |
| Tumor necrosis factor challenges in canines: patterns of cardiovascular dysfunction <i>P. W. Eichenholz, P. Q. Eichacker, W. D. Hoffman, S. M. Banks, J. E. Parrillo, R. L. Danner, and C. Natanson</i> | H668 |
| Bioassay of endothelium-derived relaxing factor in diabetic rat aorta <i>G. M. Pieper, D. A. Mei, P. Langenstroer, and S. T. O'Rourke</i> | H676 |
| CGRP and somatostatin modulate chronic hypoxic pulmonary hypertension <i>S. Tjen-A-Looi, R. Ekman, H. Lipton, J. Cary, and I. Keith</i> | H681 |
| Increased oxyhemoglobin affinity by carbamylation: coronary autoregulation and O ₂ transport <i>R. W. Baer</i> | H691 |
| Recovery of arterial pressure control after partial baroreceptor denervation in awake rabbits <i>H. Ohsumi and A. M. Scher</i> | H697 |
| Coronary microvascular response to endothelin is dependent on vessel diameter and route of administration <i>K. G. Lamping, J. L. Clothier, C. L. Eastham, and M. L. Marcus</i> | H703 |
| Difference in effect of atrial natriuretic peptide on cGMP in aortic and coronary smooth muscle cells <i>W. H. Newman, J. Kato, B. F. Becker, and M. G. Currie</i> | H710 |

| | |
|--|------|
| Norepinephrine increases the economy of pressure development in isolated canine hearts <i>J. W. Allyn, R. Teplick, J. B. Steinberg, N. A. Munfakh, G. A. Geffin, J. Titus, and W. M. Daggett</i> | H715 |
| Dexamethasone-induced differentiation of atrial myocytes in culture <i>T. M. Muir, J. Hair, G. C. Inglis, J. W. Dow, G. B. M. Lindop, and B. J. Leckie</i> | H722 |
| Fluorochemical emulsion APE-LM substantially improves cardiac preservation <i>L. D. Segel, J. M. O. Minten, and F. K. Schweighardt</i> | H730 |
| Contractile actions of C5a on isolated porcine myocardium <i>E. A. Amsterdam, S. V. Rendig, and J. C. Longhurst</i> | H740 |
| Topical arachidonic acid restores pial arteriolar dilation to hypercapnia of postischemic newborn pig brain <i>C. W. Leffler, R. Mirro, W. M. Armstead, and M. Shibata</i> | H746 |
| EDRF plays central role in collateral flow after arterial occlusion in rabbit ear <i>M. D. Randall and T. M. Griffith</i> | H752 |
| Differential effects of WEB 2086 and SRI 63-441 on TNF- α -induced alterations in cardiopulmonary function <i>K. T. Kruse-Elliott, J. R. Dodam, L. W. Johnson, and N. C. Olson</i> | H761 |
| Beneficial effects of SPM-5185, a cysteine-containing NO donor in myocardial ischemia-reperfusion <i>M. R. Siegfried, C. Carey, X.-l. Ma, and A. M. Lefer</i> | H771 |
| Aging- and training-induced alterations in collagen characteristics of rat left ventricle and papillary muscle <i>D. P. Thomas, R. J. McCormick, S. D. Zimmerman, R. K. Vadlamudi, and L. E. Gosselin</i> | H778 |
| Factors involved in left ventricular dysfunction after massive sympathetic activation <i>C. F. Pilati, F. J. Bosso, and M. B. Maron</i> | H784 |
| Saline diuresis and natriuresis in unanesthetized dogs: a missing atrial factor? <i>A. W. Cowley, Jr., A. G. Brice, and M. M. Skelton</i> | H792 |
| Effects of aging on baroreflex regulation of sympathetic activity in humans <i>T. J. Ebert, B. J. Morgan, J. A. Barney, T. Denahan, and J. J. Smith</i> | H798 |
| Exercise training improves cardiac function after ischemia in the isolated, working rat heart <i>D. K. Bowles, R. P. Farrar, and J. W. Starnes</i> | H804 |
| Leukocyte adhesion in local versus hemorrhage-induced ischemia <i>M. A. Perry and D. N. Granger</i> | H810 |
| Effect of abrupt changes in ventricular loading on repolarization induced by transient aortic occlusion in humans <i>P. Taggart, P. Sutton, M. Lab, M. Runnalls, W. O'Brien, and T. Treasure</i> | H816 |
| Thoracic aortic pressure-flow relationships and vascular impedance in fetal sheep <i>B. L. Langille and S. L. Adamson</i> | H824 |
| Chronic captopril and losartan (DuP 753) administration in rats with high-output heart failure <i>G. Qing and R. Garcia</i> | H833 |
| Mechanical performance of spared myocytes after myocardial infarction in rats: effects of captopril treatment <i>J. M. Capasso and P. Anversa</i> | H841 |
| Cardiac venous endothelial dysfunction after myocardial ischemia and reperfusion in dogs <i>D. J. Lefer, K. Nakanishi, J. Vinten-Johansen, X.-l. Ma, and A. M. Lefer</i> | H850 |
| Intracavitary ultrasound impairs left ventricular performance: presumed role of endocardial endothelium <i>T. C. Gillebert, S. G. De Hert, L. J. Andries, A. H. Jageneau, and D. L. Brutsaert</i> | H857 |
| Na ⁺ efflux mechanisms in ventricular myocytes: measurement of [Na ⁺] _i with Na ⁺ -binding benzofuran isophthalate <i>S. Borzak, M. Reers, J. Arruda, V. K. Sharma, S.-S. Sheu, T. W. Smith, and J. D. Marsh</i> | H866 |
| Hemodynamic effects of exogenous nitric oxide in ovine transitional pulmonary circulation <i>J. P. Kinsella, J. A. McQueston, A. A. Rosenberg, and S. H. Abman</i> | H875 |

| | |
|--|------|
| Pulmonary and systemic vascular smooth muscle mechanical characteristics in newborn sheep <i>J. Belik, A. J. Halayko, K. Rao, and N. L. Stephens</i> | H881 |
| Ischemic preconditioning attenuates acidosis and postischemic dysfunction in isolated rat heart <i>G. K. Asimakis, K. Inners-McBride, G. Medellin, and V. R. Conti</i> | H887 |
| Comparison of protein lymph flux and extravascular uptake in skin during increased venous pressure <i>J. R. Wallace and D. R. Bell</i> | H895 |
| ³¹ P-NMR of high-energy phosphates in perfused rat heart during metabolic acidosis <i>L. A. Jelicks and R. K. Gupta</i> | H903 |
| Effects of Na-K-ATPase inhibition on catecholamine reactivity in rat pulmonary artery <i>M. Cutaia and K. Rudio</i> | H910 |
| Fetal cardiac bypass alters regional blood flows, arterial blood gases, and hemodynamics in sheep <i>S. M. Bradley, F. L. Hanley, B. W. Duncan, R. W. Jennings, J. A. Jester, M. R. Harrison, and E. D. Verrier</i> | H919 |
| Chronic coronary arterial stenosis impairs α_1 -adrenoreceptor signaling and cardiac performance in rats <i>L. G. Meggs, H. Huang, P. Li, J. M. Capasso, and P. Anversa</i> | H929 |
| Low-dose endothelin-1 potentiates volume-induced secretion of atrial natriuretic factor <i>J. Donckier, C. Hanet, L. Galanti, L. Stoleru, H. Van Mechelen, A. Robert, J.-M. Ketelslegers, and H. Pouleur</i> | H939 |
| Concurrent increases in regional hematocrit and blood flow in diabetic rats: prevention by sorbinil <i>S. P. Suter, K. Chang, J. Marvel, and J. R. Williamson</i> | H945 |
| Endothelin in thoracic inferior vena caval constriction model of heart failure <i>R. D. Underwood, L. L. Aarhus, D. M. Heublein, and J. C. Burnett, Jr.</i> | H951 |
| Hypoxia induces endothelial cells to increase their adherence for neutrophils: role of PAF <i>K. A. Milhoan, T. A. Lane, and C. M. Bloor</i> | H956 |

SPECIAL COMMUNICATIONS

| | |
|--|------|
| Dynamic intramyocardial blood volume: evaluation with a radiological opaque marker method <i>Y.-H. Liu, R. C. Bahn, and E. L. Ritman</i> | H963 |
| Measurement of biventricular septal-to-free wall diameters using sonomicrocrystals <i>H. Yamashita, S. Onodera, H. Morimoto, T. Imamoto, A. Obara, S. Tanazawa, T. Takashio, H. Inoue, and H. Omiya</i> | H968 |
| Suppression of motion artifacts in fluorescence spectroscopy of perfused hearts <i>R. Brandes, V. M. Figueredo, S. A. Camacho, B. M. Massie, and M. W. Weiner</i> | H972 |

LETTERS TO THE EDITOR

| | |
|--|------|
| Use and limitations of thiobarbituric acid reaction to detect lipid peroxidation <i>G. A. Fantini and T. Yoshioka; C. Cecconi</i> | H981 |
|--|------|

No. 4. OCTOBER 1992

INVITED REVIEW

| | |
|---|------|
| The endocardial endothelium <i>D. L. Brutsaert and L. J. Andries</i> | H985 |
|---|------|

| | |
|---|-------|
| Calculation of oxygen diffusion across the surface of isolated perfused hearts <i>J. H. G. M. van Beek, D. S. Loiselle, and N. Westerhof</i> | H1003 |
|---|-------|

| | |
|---|-------|
| Limited left ventricular inotropic response to exercise in early phase of pressure overload in dogs <i>J. B. Su, L. Hittinger, P. Le Franc, and B. Crozatier</i> | H1011 |
| Altered pressure-volume relation of right atrium and venoatrial junction in diabetic rats <i>M. B. Patel, P. L. Zhang, A. C. Patel, and K. P. Patel</i> | H1017 |
| Long-term calorie restriction enhances baroreflex responsiveness in Fischer 344 rats <i>J. T. Herlihy, C. Stacy, and H. A. Bertrand</i> | H1021 |
| Spinal stimulation to locate preganglionic neurons controlling the kidney, spleen, or intestine <i>R. B. Taylor and L. C. Weaver</i> | H1026 |
| L-selectin function is required for β_2 -integrin-mediated neutrophil adhesion at physiological shear rates in vivo <i>U. H. von Andrian, P. Hansell, J. D. Chambers, E. M. Berger, I. T. Filho, E. C. Butcher, and K.-E. Arfors</i> | H1034 |
| Neuropeptide Y and coronary vasoconstriction: role of thromboxane A ₂ <i>S. E. Martin, J. T. Kuvin, S. Offenbacher, B. M. Odle, and R. E. Patterson</i> | H1045 |
| Cardiac adaptation of sarcomere dynamics to arterial load: a model of hypertrophy <i>G. M. Drzewiecki, E. Karam, J. K.-J. Li, and A. Noordergraaf</i> | H1054 |
| Transvascular albumin and IgG flux in skin after a continuous 3-h bradykinin infusion <i>J. R. Wallace and D. R. Bell</i> | H1064 |
| Endothelium-dependent ANF secretion in vitro <i>R. A. Lew and A. J. Baertschi</i> | H1071 |
| Sympathetic modulation of blood flow and O ₂ uptake in rhythmically contracting human forearm muscles <i>M. J. Joyner, L. A. Nauss, M. A. Warner, and D. O. Warner</i> | H1078 |
| Baro- and ventricular reflexes in conscious dogs subjected to chronic tachycardia <i>J.-S. Chen, W. Wang, K. G. Cornish, and I. H. Zucker</i> | H1084 |
| Heterogeneous distribution of endothelium-dependent relaxations resistant to N ^G -nitro-L-arginine in rats <i>T. Nagao, S. Illiano, and P. M. Vanhoutte</i> | H1090 |
| Correlation of structure and viscoelastic properties in the pericardia of four mammalian species <i>W. A. Naimark, J. M. Lee, H. Limeback, and D. T. Cheung</i> | H1095 |
| Ischemic preconditioning protects against infarction in rat heart <i>Y. Liu and J. M. Downey</i> | H1107 |
| Effects of CD-349 and 8-BrcGMP on isoproterenol-induced relaxation in rabbit aorta precontracted with endothelin-1 <i>N. Miyata, H. Yamaura, K. Tsuchida, and S. Otomo</i> | H1113 |
| Role of adenosine for reactive hyperemia in normal and stunned porcine myocardium <i>K. A. Kirkeboen, G. Aksnes, K. Lande, and A. Ilebekk</i> | H1119 |
| Electroporation and recovery of cardiac cell membrane with rectangular voltage pulses <i>O. Tovar and L. Tung</i> | H1128 |
| Left ventricular hypertrophy due to volume overload versus pressure overload <i>B. A. Carabello, M. R. Zile, R. Tanaka, and G. Cooper IV</i> | H1137 |
| Distribution of coronary collateral blood flow at different levels of collateral growth in conscious ponies <i>R. B. Boatwright, D. O. Williams, K. S. Rugh, R. D. Sarazan, C. R. Ross, H. E. Garner, and D. M. Griggs, Jr.</i> | H1145 |
| Sodium modulates inotropic response to hyperosmolarity in isolated working rat heart <i>S. A. Ben-Haim, Y. Edoute, G. Hayam, and O. S. Better</i> | H1154 |
| Sodium-calcium exchange-mediated contractions in feline ventricular myocytes <i>H. B. Nuss and S. R. Houser</i> | H1161 |
| Tissue uptake of insulin and inulin in red and white skeletal muscle in vivo <i>A. Holmång, P. Björntorp, and B. Rippe</i> | H1170 |
| Role of myogenic response in enhancing autoregulation of flow during sympathetic nerve stimulation <i>P. Ping and P. C. Johnson</i> | H1177 |

| | |
|---|-------|
| Mechanism of enhanced myogenic response in arterioles during sympathetic nerve stimulation <i>P. Ping and P. C. Johnson</i> | H1185 |
| Age-dependent changes in α -adrenoceptor-mediated contractility of isolated human resistance arteries <i>H. Nielsen, J. M. Hasenkam, H. K. Pilegaard, C. Aalkjær, and F. V. Mortensen</i> | H1190 |
| Local temperature modulates α_1 - and α_2 -adrenergic vasoconstriction in men <i>R. R. Freedman, S. C. Sabharwal, M. Moten, and P. Migály</i> | H1197 |
| Dobutamine improves afterload-induced deterioration of mechanical efficiency toward maximal <i>T. Nozawa, O. Wada, S. Ishizaka, H. Asanoi, M. Fujita, and S. Sasayama</i> | H1201 |
| Muscarinic cholinergic receptors in canine adrenal gland <i>J. R. Tobin, M. J. Breslow, and R. J. Traystman</i> | H1208 |
| Endotoxin enhances arachidonic acid metabolism by cultured rabbit microvascular endothelial cells <i>P. M. Renzi and J. T. Flynn</i> | H1213 |
| Interstitial exclusion of albumin in rat tissues measured by a continuous infusion method <i>H. Wiig, M. DeCarlo, L. Sibley, and E. M. Rcnkin</i> | H1222 |
| Cytochemical detection of superoxide in cerebral inflammation and ischemia in vivo <i>C. D. Kontos, E. P. Wei, J. I. Williams, H. A. Kontos, and J. T. Povlishock</i> | H1234 |
| PEG-SOD improves postischemic functional recovery and antioxidant status in blood-perfused rabbit hearts <i>Y. Qiu, M. Galiñanes, R. Ferrari, A. Cargnoni, A. Ezrin, and D. J. Hearse</i> | H1243 |
| Different responses of extent and velocity of contraction to dobutamine in conscious sheep <i>T. Aoyagi, A. M. Fujii, S. D. Colan, M. F. Flanagan, and I. Mirsky</i> | H1250 |
| Recovery of anoxic-reoxygenated cardiomyocytes from severe Ca^{2+} overload <i>B. Siegmund, R. Zude, and H. M. Piper</i> | H1262 |
| Biphasic blood volume changes with lower body suction in humans <i>H. Hinghofer-Szalkay, E. M. König, G. Sauseng-Fellegger, and C. Zambo-Polz</i> | H1270 |
| Regional cerebrovascular responses to progressive hypotension after traumatic brain injury in cats <i>D. S. DeWitt, D. S. Prough, C. L. Taylor, J. M. Whitley, D. D. Deal, and S. M. Vines</i> | H1276 |
| Effect of anesthetic on sympathetic responses evoked from cerebellar uvula in decerebrate cats <i>J. F. R. Paton and M. P. Gilbey</i> | H1285 |
| Stretch-induced increases in intracellular calcium of isolated vascular smooth muscle cells <i>M. J. Davis, G. A. Meininger, and D. C. Zawieja</i> | H1292 |
| Beneficial influence of vasoactive intestinal peptide on ventriculovascular coupling in closed-chest dogs <i>J. T. Colston and G. L. Freeman</i> | H1300 |
| Effect of acute ventricular dilatation on fibrillation thresholds in the isolated rabbit heart <i>S. Jalal, G. R. Williams, D. E. Mann, and M. J. Reiter</i> | H1306 |

SPECIAL COMMUNICATION

| | |
|--|-------|
| A new approach to analysis of synchronized sympathetic nerve activity <i>S. C. Malpas and I. Ninomiya</i> | H1311 |
|--|-------|

RAPID COMMUNICATIONS

| | |
|---|-------|
| Presence of C-type natriuretic peptide in cultured human endothelial cells and plasma <i>A. J. Stingo, A. L. Clavell, D. M. Heublein, C.-M. Wei, M. R. Pittelkow, and J. C. Burnett, Jr.</i> | H1318 |
| Effect of adenosine deaminase on cardiac interstitial adenosine <i>Q. Zhu, G. P. Matherne, R. R. Curnish, C. G. Tribble, and R. M. Berne</i> | H1322 |

Maximal myocardial blood flow is enhanced by chronic hypoxemia in late gestation fetal sheep

M. D. Reller, M. J. Morton, G. D. Giraud, D. E. Wu, and K. L. Thornburg

H1327

No. 5. NOVEMBER 1992

Regulatory effect of thromboxane A₂ on proliferation of vascular smooth muscle cells from rats

T. Nagata, Y. Uehara, A. Numabe, T. Ishimitsu, N. Hirawa, T. Ikeda, H. Matsuoka, and T. Sugimoto

H1331

Hypoxia-elicited contraction of aorta and coronary artery via removal of endothelium-derived nitric oxide

M. Muramatsu, Y. Iwama, K. Shimizu, H. Asano, Y. Toki, Y. Miyazaki, K. Okumura, H. Hashimoto, and T. Ito

H1339

Spectrum analysis of sympathetic nerve activity and blood pressure in conscious rats

P. B. Persson, H. Stauss, O. Chung, U. Wittmann, and T. Unger

H1348

Oxygen radicals in cerebral ischemia

C. W. Nelson, E. P. Wei, J. T. Povlishock, H. A. Kontos, and M. A. Moskowitz

H1356

Role of ATP-sensitive potassium channels in ovine fetal pulmonary vascular tone

D. N. Cornfield, J. A. McQueston, I. F. McMurtry, D. M. Rodman, and S. H. Abman

H1363

Capillary length, tortuosity, and spacing in rat myocardium during cardiac cycle

S. Batra and K. Rakusan

H1369

Corticoid regulation of atrial natriuretic factor secretion and gene expression

J. Dananberg and R. J. Grekin

H1377

Effect of coronary perfusion of heptanol or potassium on conduction and ventricular arrhythmias

D. J. Callans, R. S. Kieval, B. G. Hook, E. N. Moore, and J. F. Spear

H1382

Prostacyclin rather than endogenous nitric oxide is a tissue protective factor in myocardial ischemia

I. Woditsch and K. Schrör

H1390

Extracorporeal circuits and autoregulation: effect of albumin coating

P. Borgdorff, W. E. M. Kok, and G. C. van den Bos

H1397

Physical and physiological characteristics of pressure-driven hemorrhage

M. Rocha e Silva, G. A. Braga, R. Prist, I. T. Velasco, and E. S. V. França

H1402

Attenuation of postischemic microvascular disturbances in striated muscle by hyperosmolar saline dextran

D. Nolte, M. Bayer, H.-A. Lehr, M. Becker, F. Krombach, U. Kreimeier, and K. Messmer

H1411

Hydraulic conductivity of basement membrane with computed values for fiber radius and void volume ratio

M. A. Katz, T. Barrette, and M. Krasovich

H1417

Magnitude of β -adrenoceptor-mediated responses of dog epicardial coronary arteries: inverse relation to diameter

S. L. Krauss, J. T. Dodge, and J. A. Bevan

H1422

Expression of Na⁺-K⁺-ATPase α_1 - and α_3 -isoforms in adult and neonatal ferret hearts

Y.-C. Ng and C.-B. S. Book

H1430

Relative responses to luminal and adventitial adenosine in perfused arteries

J. P. Headrick, F. J. Northington, M. R. Hynes, G. P. Matherne, and R. M. Berne

H1437

Endothelin stimulates multiple responses in isolated adult ventricular cardiac myocytes

L. G. Jones, J. D. Rozich, H. Tsutsui, and G. Cooper IV

H1447

Reversal by increased CSF [H⁺] and [K⁺] of phorbol ester-induced arteriolar constriction in piglets

D. W. Busija and J. Chen

H1455

Adenosine improves recovery of postischemic myocardial function via an adenosine A₁ receptor mechanism

R. D. Lasley and R. M. Mentzer, Jr.

H1460

| | |
|--|-------|
| Anisotropic conduction and reentry in perfused epicardium of rabbit left ventricle <i>M. J. Schaliij, W. J. E. P. Lammers, P. L. Rensma, and M. A. Allesie</i> | H1466 |
| Influence of dietary fish oil on mitochondrial function and response to ischemia <i>J. B. McMillin, R. J. Bick, and C. R. Benedict</i> | H1479 |
| Characteristics and origin of myogenic response in isolated mesenteric arterioles <i>D. Sun, E. J. Messina, G. Kaley, and A. Koller</i> | H1486 |
| Downregulation of blood and bone marrow neutrophils decreases expression of acute lung injury in sheep <i>P. J. McKenna, D. L. Rosolia, Y. Ishihara, K. H. Albertine, N. C. Staub, and M. H. Gee</i> | H1492 |
| Glycogen depletion-induced lactate reductions attenuate reflex responses in exercising humans <i>L. I. Sinoway, K. J. Wroblewski, S. A. Prophet, S. M. Ettinger, K. S. Gray, S. K. Whisler, G. Miller, and R. L. Moore</i> | H1499 |
| Sarcolemmal $\text{Na}^+\text{-Ca}^{2+}$ exchange activity and exchanger immunoreactivity in developing rabbit hearts <i>M. Artman</i> | H1506 |
| Development of cardiac innervation, ventricular fibrillation, and sudden infant death syndrome <i>M. Stramba-Badiale, M. Lazzarotti, and P. J. Schwartz</i> | H1514 |
| Baroreflex regulation of forearm vascular resistance after exercise in hypertensive and normotensive humans <i>J. Cl  roux, N. Kouam  , A. Nadeau, D. Coulombe, and Y. Lacourci  re</i> | H1523 |
| K^+_{ATP} -channel activation causes marked vasodilation in the hypertensive neonatal pig lung <i>J. M. B. Pinheiro and A. B. Malik</i> | H1532 |
| Aortic perfusion pressure as early determinant of β -isomyosin expression in perfused hearts <i>C. Delcayre, D. Klug, N. van Thiem, C. Mouas, and B. Swynghedauw</i> | H1537 |
| Hemoprotein-dependent production of a neutrophil-activating factor from arachidonic acid <i>J. L. Wallace, K. P. Rioux, W. McKnight, L. Carter, D. Jourdain, J. Meddings, B. J. Zimmerman, D. N. Granger, and M. B. Grisham</i> | H1546 |
| Left ventricular dimensions during hemorrhagic shock measured by biplane cinefluorography <i>J. W. Horton and J. H. Mitchell</i> | H1554 |
| Translation of heart preproenkephalin mRNA and secretion of enkephalin peptides from cultured cardiac myocytes <i>J. P. Springhorn and W. C. Claycomb</i> | H1560 |
| Tonic sympathetic excitation and vasomotor control from pontine reticular neurons <i>K. Hayes and L. C. Weaver</i> | H1567 |
| Chronic administration of cardiovascular drugs: altered energetics and transmembrane signaling <i>R. A. Chapados, E. J. Gruver, J. S. Ingwall, J. D. Marsh, and J. K. Gwathmey</i> | H1576 |
| Absence of right ventricular isovolumic relaxation in open-chest anesthetized dogs <i>E. S. P. Myhre, B. K. Slinker, and M. M. LeWinter</i> | H1587 |
| Action potential conduction between guinea pig ventricular cells can be modulated by calcium current <i>H. Sugiura and R. W. Joyner</i> | H1591 |
| Neural mechanisms regulating neurohypophysial resistance arteries <i>D. F. Hanley, D. A. Wilson, M. A. Conway, R. J. Traystman, J. A. Bevan, and J. E. Brayden</i> | H1605 |

SPECIAL COMMUNICATIONS

| | |
|---|-------|
| An angiographic method for in vivo study of arteries of the circle of Willis in small animals <i>D. R. Harder, M. L. Schulte, A. V. Clough, and C. A. Dawson</i> | H1616 |
|---|-------|

Suction effusion fluid from skin and constituent analysis: new candidate for interstitial fluid

S. Kayashima, T. Arai, M. Kikuchi, N. Nagata, N. Ito, T. Kuriyama, and J. Kimura

H1623

RAPID COMMUNICATIONS

Recovery of vascular tissue contractile function during sustained endotoxin exposure

T. M. McKenna

H1628

L-Arginine decreases infarct size caused by middle cerebral arterial occlusion in SHR

E. Morikawa, Z. Huang, and M. A. Moskowitz

H1632

No. 6. DECEMBER 1992

Phalloidin prevents leukocyte emigration induced by proinflammatory stimuli in rat mesentery

H. Asako, R. E. Wolf, D. N. Granger, and R. J. Korthuis

H1637

Effect of protein kinase C inhibitors on endothelin- and vasopressin-induced constriction of the rat basilar artery

M. A. Murray, F. M. Faraci, and D. D. Heistad

H1643

Intracoronary L-arginine during reperfusion improves endothelial function and reduces infarct size

K. Nakanishi, J. Vinten-Johansen, D. J. Lefer, Z. Zhao, W. C. Fowler III, D. S. McGee, and W. E. Johnston

H1650

Analysis of systemic and pulmonary vascular responses to PACAP and VIP: role of adrenal catecholamines

R. K. Minkes, T. J. McMahon, T. R. Higuera, W. A. Murphy, D. H. Coy, and P. J. Kadowitz

H1659

Prostanoids modulate opioid-induced increases in cerebrospinal fluid vasopressin concentration

W. M. Armstead, R. Mirro, M. Shibata, and C. W. Leffler

H1670

Heart size and maximal cardiac output are limited by the pericardium

H. K. Hammond, F. C. White, V. Bhargava, and R. Shabetai

H1675

α -Adrenergic vasoconstriction in normal and hypoperfused myocardium during sympathetic nerve stimulation

J. Westby, S. Birkeland, S. E. Rynning, O. L. Myking, J. Lekven, and K. Grong

H1682

Thapsigargin, a new inotropic agent, antagonizes action of endothelin-1 in rat atrial cells

P. Vigne, J. P. Breittmayer, and C. Frelin

H1689

Phospholipid peroxidation deacylation and remodeling in postischemic skeletal muscle

B. B. Rubin, G. Chang, S. Liauw, A. Young, A. Romaschin, and P. M. Walker

H1695

Myocardial and endothelial dysfunction after multiple, brief coronary occlusions: role of oxygen radicals

G. J. Gross, S. T. O'Rourke, L. R. Pelc, and D. C. Wartier

H1703

Force-frequency relations and response to ryanodine in failing rabbit hearts

A. Ezzaher, N. el Houda Bouanani, and B. Crozatier

H1710

Effect of afterload and β -adrenergic blockade on nonischemic myocardial contraction pattern

S. Birkeland, J. Westby, K. Grong, and J. Lekven

H1716

Recruitment of myocardial work and metabolism in regionally stunned porcine myocardium

E. O. McFalls, D. J. Duncker, R. Krams, L. M. A. Sassen, A. Hoogendoorn, and P. D. Verdouw

H1724

T-Q, S-T segment mapping and hyperemia in reperfused pig heart with ischemic preconditioning

J. Cinca, F. Worner, A. Carreño, R. Coronel, A. Soldevilla, F. Pérez-Villa, M. J. Janse, and J. Soler-Soler

H1732

| | |
|--|-------|
| Trophic effects of catecholamines and parathyroid hormone on adult ventricular cardiomyocytes <i>K.-D. Schlüter and H. M. Piper</i> | H1739 |
| Differences in rate dependence of transient outward current in rabbit and human atrium <i>B. Fermini, Z. Wang, D. Duan, and S. Nattel</i> | H1747 |
| Baroreflex control of regional capacitance and blood flow distribution with or without α -adrenergic blockade <i>A. Deschamps and S. Magder</i> | H1755 |
| Pregnancy reduces serotonin-induced contraction of guinea pig uterine and carotid arteries <i>C. P. Weiner, L. P. Thompson, K.-Z. Liu, and J. E. Herrig</i> | H1764 |
| Blood viscosity in tube flow: dependence on diameter and hematocrit <i>A. R. Pries, D. Neuhaus, and P. Gaehtgens</i> | H1770 |
| Desensitization to acetylcholine in single sinoatrial node cells isolated from rabbit hearts <i>H. Honjo, I. Kodama, W.-J. Zang, and M. R. Boyett</i> | H1779 |
| Divergent regulation of atrial natriuretic factor receptors in high-output heart failure <i>R. Garcia, M.-C. Bonhomme, and E. L. Schiffrin</i> | H1790 |
| Myocardial performance of STZ-diabetic DOCA-hypertensive rats <i>S. Dai and J. H. McNeill</i> | H1798 |
| Acute endoneurial ischemia induced by epineurial endothelin in the rat sciatic nerve <i>D. W. Zochodne, L. T. Ho, and P. M. Gross</i> | H1806 |
| 2,3-Butanedione monoxime increases contractile efficiency in the rabbit ventricle <i>M. W. Watkins, B. K. Slinker, Y. Goto, and M. M. LeWinter</i> | H1811 |
| Ontogeny of baroreflex control of renal sympathetic nerve activity and heart rate <i>J. L. Segar, G. Hajduczuk, B. A. Smith, D. C. Merrill, and J. E. Robillard</i> | H1819 |
| Ca^{2+} -dependent and Ca^{2+} -permeable ion channels in aortic endothelial cells <i>B. N. Ling and W. C. O'Neill</i> | H1827 |
| Effects of hypoxia, hyperoxia and hypercapnia on graded cerebral ischemic responses in rabbits <i>T. Takeuchi, J. Horiuchi, N. Terada, M. Nagao, and H. Terajima</i> | H1839 |
| Skeletal muscle arteriolar constriction to ANG II: evaluation of a myogenic component <i>J. T. Fleming, G. L. Anderson, and J. Chen</i> | H1847 |
| Cellular \dot{V}_{\max} reflects both membrane properties and the load presented by adjoining cells <i>M. S. Spach, J. F. Heidlage, E. R. Darken, E. Hofer, K. H. Raines, and C. F. Starmer</i> | H1855 |
| Hypocapnic-hypoglycemic interactions on cerebral high-energy phosphates and pH in dogs <i>F. E. Sieber, S. A. Derrer, S. M. Eleff, R. C. Koehler, and R. J. Traystman</i> | H1864 |
| Antibodies to SPARC inhibit albumin binding to SPARC, gp60, and microvascular endothelium <i>J. E. Schnitzer and P. Oh</i> | H1872 |
| Role of endothelial cells in regulating hemoglobin-induced changes in lymphatic pumping <i>R. M. Elias, J. Eisenhoffer, and M. G. Johnston</i> | H1880 |
| cAMP and extrarenal vasopressin V_2 receptors in dogs <i>J.-F. Liard</i> | H1888 |
| Microvascular ischemia-reperfusion injury in striated muscle: significance of "no reflow" <i>M. D. Menger, D. Steiner, and K. Messmer</i> | H1892 |
| Microvascular ischemia-reperfusion injury in striated muscle: significance of "reflow paradox" <i>M. D. Menger, S. Pelikan, D. Steiner, and K. Messmer</i> | H1901 |
| α_2 -Adrenoceptors mediate norepinephrine constriction of porcine pial veins <i>Y. Asada and T. J.-F. Lee</i> | H1907 |
| Systemic hemodynamics and oxygen transport during pregnancy in chronically instrumented, conscious rats <i>G. J. Gilson, M. D. Mosher, and K. P. Conrad</i> | H1911 |

| | |
|---|-------|
| Evaluation of hypercholesterol diet-induced changes in viscoelastic properties of carotid circulation in pigs <i>R. Burattini, L. Montanari, L. J. Mulligan, M. S. Cannon, and D. R. Gross</i> | H1919 |
| Antiadrenergic effect of M-cholinoceptor stimulation on human ventricular contractility in vivo <i>W. von Scheidt, M. Böhm, A. Stäblein, G. Autenrieth, and E. Erdmann</i> | H1927 |
| Age-related decline in left ventricular filling at rest and exercise <i>S. P. Schulman, E. G. Lakatta, J. L. Fleg, L. Lakatta, L. C. Becker, and G. Gerstenblith</i> | H1932 |
| Blood volume changes in microcirculation of rat intestine caused by carotid sinus baroreceptor reflex <i>E. B. Haase and A. A. Shoukas</i> | H1939 |

SPECIAL COMMUNICATION

| | |
|---|-------|
| New nonradioactive microspheres and more sensitive X-ray fluorescence to measure regional blood flow <i>H. Mori, S. Haruyama, Y. Shinozaki, H. Okino, A. Iida, R. Takanashi, I. Sakuma, W. K. Hussein, B. D. Payne, and J. I. E. Hoffman</i> | H1946 |
|---|-------|

RAPID COMMUNICATIONS

| | |
|---|-------|
| Determination of chloride potential in perfused rat hearts by nuclear magnetic resonance spectroscopy <i>R. Ramasamy, P. Zhao, W. L. Gitomer, A. D. Sherry, and C. R. Malloy</i> | H1958 |
| Nitric oxide production within cardiac myocytes reduces their contractility in endotoxemia <i>A. J. B. Brady, P. A. Poole-Wilson, S. E. Harding, and J. B. Warren</i> | H1963 |
| Sustained outward current observed after I_{to1} inactivation in rabbit atrial myocytes is a novel Cl^- current <i>D.-Y. Duan, B. Fermini, and S. Nattel</i> | H1967 |

LETTERS TO THE EDITOR

| | |
|--|-------|
| PS products and capillary reflection coefficients from analysis of lymphatic protein flux data <i>R. K. Reed, M. I. Townsley, R. Korthius, and A. E. Taylor; P. D. Watson</i> | H1972 |
|--|-------|

| | |
|-----------------------------------|-------|
| <i>Subject Index to Volume 32</i> | H1975 |
| <i>Author Index to Volume 32</i> | H1989 |

CORRIGENDA

Volume 262, April 1992
Volume 31, April 1992

Pages H1268-H1286: M. R. Guevara and H. J. Jongsma. "Three ways of abolishing automaticity in sinoatrial node: ionic modeling and nonlinear dynamics."
Page H1284: In the NOTE ADDED IN PROOF, the word *depolarizing* should be replaced by *hyperpolarizing*.

Pages H1515-H1524: A. Tajima, H. Nakata, S.-Z. Lin, V. Acuff, and J. Fenstermacher. "Differences and similarities in albumin and red blood cell flows through cerebral microvessels." Page H1521: right column, second paragraph, the first four lines read as follows:

If the cycling period is <10 s for the system, then all of the capillaries will be perfused and labeled within 10 s of the first appearance of RISA and radiotagged RBCs in cerebral capillaries. The time from intravenous injection to radiotracer appearance in cerebral capillaries is ~ 7 s in the awake rat.

Pages H1606-H1610: B. C. Simon and R. A. Cohen. "EDTA influences reactivity of isolated aorta from hypercholesterolemic rabbits." Page H1608: Figures 1 and 2 should read as the following.

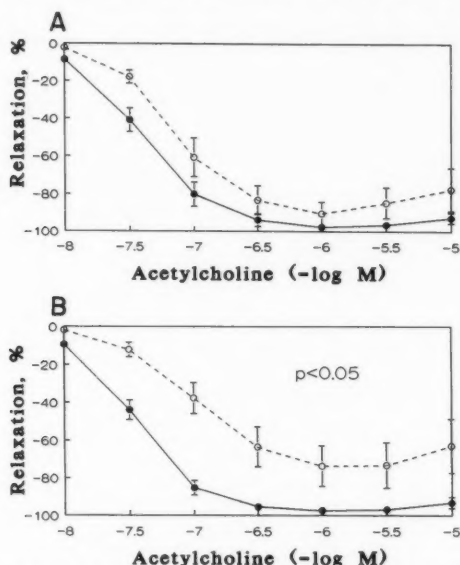


Fig. 1. Effect of EDTA on endothelium-dependent relaxation evoked by acetylcholine in aortic rings from control (filled circles, $n = 8$) and hypercholesterolemic rabbits (open circles, $n = 7$). Rings were contracted with phenylephrine, and relaxations are expressed as percentage of phenylephrine-induced tone. In absence (B), but not in the presence (A) of EDTA, relaxations of rings from hypercholesterolemic rabbits were significantly inhibited compared with those in rings from control rabbits. Comparisons were made by analysis of variance where $P < 0.05$ was considered significant.

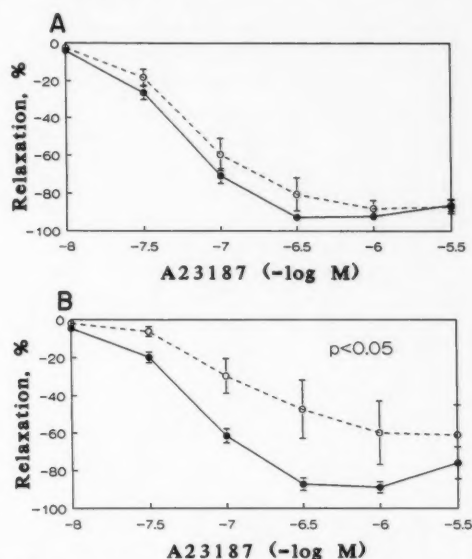


Fig. 2. Effect of EDTA on endothelium-dependent relaxation to A23187 in aortic rings from control (filled circles, $n = 8$) and hypercholesterolemic rabbits (open circles, $n = 7$). Rings were contracted with phenylephrine, and relaxations are expressed as percentage of phenylephrine-induced tone. In absence (B) but not in presence (A) of EDTA, relaxations of rings from hypercholesterolemic rabbits were significantly inhibited compared with control rabbits. Comparisons were made by analysis of variance where $P < 0.05$ was considered significant.

Pages H857-H865: T. C. Gillebert, S. G. De Hert, L. J. Andries, A. H. Jageneau, and D. Brutsaert. "Intracavitary ultrasound impairs left ventricular performance: presumed role of endocardial endothelium." Because of typographical errors in the numbering of the references, some of the text citations were inconsistent. Therefore this entire article is reprinted at the end of this December issue.

American Journal of Physiology: Regulatory, Integrative and Comparative Physiology

KEY TO CATEGORIES: 1. Comparative Physiology *Regulation and Integration in:* 2. Autonomic Physiology;
3. Behavior; 4. Cardiovascular Physiology; 5. Endocrinology; 6. Energetics; 7. Fluids and
Electrolytes; 8. Functional Morphology; 9. Ingestion; 10. Periodicity; 11. Respiration;
12. Temperature

No. 1. JULY 1992

CATEGORY

EDITORIAL

Perspectives

W. H. Dantzler

R1

-
- | | | |
|--------|---|------|
| 4,8 | Composition and mechanics of mesenteric resistance arteries from pregnant rats <i>K. Mackey, M. C. Meyer, W. S. Stirewalt, B. C. Starcher, and M. K. McLaughlin</i> | R2 |
| 5,7,9 | Hypertonic NaCl inhibits gastric motility and food intake in rats with lesions in the rostral AV3V region <i>L. M. Flanagan, R. E. Blackburn, J. G. Verbalis, and E. M. Stricker</i> | R9 |
| 1,5,8 | Properties and localization of endothelin-1-specific receptors in rat testicles <i>H. Sakaguchi, M. Kozuka, S. Hirose, T. Ito, and H. Hagiwara</i> | R15 |
| 9,4 | Sepsis produces early depression of gut absorptive capacity: restoration with diltiazem treatment <i>G. Singh, K. I. Chaudry, L. C. Chudler, and I. H. Chaudry</i> | R19 |
| 2,4 | Midbrain central gray: influence on medullary sympathoexcitatory neurons and the baroreflex in rats <i>A. J. M. Verberne and P. G. Guyenet</i> | R24 |
| 5,2,1 | Adrenergic regulation of neonatal brown fat adenylyl cyclase and $G_{\alpha s}$ activity <i>A. Chaudhry and J. G. Granneman</i> | R34 |
| 5,7,9 | Gastric motility and food intake in rats after lesions of hypothalamic paraventricular nucleus <i>L. M. Flanagan, J. Dohanics, J. G. Verbalis, and E. M. Stricker</i> | R39 |
| 4 | Endothelium-derived relaxing factor in pulmonary and renal circulations during hypoxia <i>M. A. Perrella, E. S. Edell, M. J. Krowka, D. A. Cortese, and J. C. Burnett, Jr.</i> | R45 |
| 10,3 | Isoperiodic neuronal activity in suprachiasmatic nucleus of the rat <i>J. D. Miller and C. A. Fuller</i> | R51 |
| 12 | Differences in brown adipose tissue thermogenic responses between Long-Evans and Sprague-Dawley rats <i>J. Thornhill and I. Halvorson</i> | R59 |
| 5 | Diverse effects of calcium channel blockers on skeletal muscle glucose transport <i>G. D. Cartee, C. Briggs-Tung, and J. O. Holloszy</i> | R70 |
| 1,7 | Ion transport by the isolated mantle epithelium of the freshwater clam, <i>Unio complanatus</i> <i>R. L. Hudson</i> | R76 |
| 3,5,9 | Possible mediation by luminal somatostatin of bombesin-induced satiety in the cat <i>A. Bado, L. Moizo, J.-P. Laigneau, M. Gauthier, M. Dubrasquet, and M. J. M. Lewin</i> | R84 |
| 4,2 | Differential baroreceptor reflex modulation by centrally infused angiotensin peptides <i>M. J. Campagnole-Santos, S. B. Heringer, E. N. Batista, M. C. Khosla, and R. A. S. Santos</i> | R89 |
| 2,4,10 | Circulatory dynamics during periodic intracranial hypertension in fetal sheep <i>A. P. Harris, R. C. Koehler, M. K. Nishijima, R. J. Traystman, and M. D. Jones, Jr.</i> | R95 |
| 2,4 | Suppression of baroreceptor discharge by endothelin at high carotid sinus pressure <i>M. W. Chapleau, G. Hajduczuk, and F. M. Abboud</i> | R103 |

| | | |
|---------|---|------|
| 2,4 | Renal nerve activity in rats with spontaneous hypertension: effect of converting enzyme inhibitor <i>H. Kumagai, D. B. Averill, and C. M. Ferrario</i> | R109 |
| 10,3,9 | Anticipatory activity and entrainment of circadian rhythms in Syrian hamsters exposed to restricted palatable diets <i>H. Abe and B. Rusak</i> | R116 |
| 3,9 | Behavioral effects of A71623, a highly selective CCK-A agonist tetrapeptide <i>K. E. Asin, L. Bednarz, A. L. Nikkel, P. A. Gore, Jr., W. E. Montana, M. J. Cullen, K. Shiosaki, R. Craig, and A. M. Nadzan</i> | R125 |
| 5,4 | Prostaglandin E ₂ releases ovine fetal ACTH from a site not perfused by the carotid vasculature <i>T. A. Cudd and C. E. Wood</i> | R136 |
| 11 | Fractal properties in fetal breathing dynamics <i>H. H. Szeto, P. Y. Cheng, J. A. Decena, Y. Cheng, D.-L. Wu, and G. Dwyer</i> | R141 |
| 7 | Hyperosmolality impairs ammonia-mediated inflammation: implications for the renal medulla <i>E. C. Clark, K. A. Nath, T. H. Hostetter, and M. K. Hostetter</i> | R148 |
| 1,4,5 | Pituitary-adrenal responses to head-up tilt in humans: effect of H ₁ - and H ₂ -receptor blockade <i>S. Matzen, N. H. Secher, U. Knigge, F. W. Bach, and J. Warberg</i> | R156 |
| 5 | Healing of intestinal anastomoses in adrenalectomized rats given corticosterone <i>S. Matsusue and M. Walser</i> | R164 |
| 3,7,9 | Salt taste discrimination after bilateral section of the chorda tympani or glossopharyngeal nerves <i>A. C. Spector and H. J. Grill</i> | R169 |
| 1,4,6 | Temperature dependence of electrophysiological properties of guinea pig and ground squirrel myocytes <i>J. C. Herve, K. Yamaoka, V. W. Twist, T. Powell, J. C. Ellory, and L. C. H. Wang</i> | R177 |
| 12,8 | Cryomicroscopic analysis of freezing in liver of the freeze-tolerant wood frog <i>K. B. Storey, J. Bischof, and B. Rubinsky</i> | R185 |
| 1 | Strong conservation of the expression of cystatin C gene in choroid plexus <i>G.-F. Tu, A. R. Aldred, B. R. Southwell, and G. Schreiber</i> | R195 |
| 1,11,12 | Effects of hydration state on exercise thermoregulation in goats <i>M. J. M. Nijland and M. A. Baker</i> | R201 |

MODELING IN PHYSIOLOGY

| | | |
|-----|--|------|
| 4,9 | Comparing responses when each response is a curve <i>D. Verotta and L. B. Sheiner</i> | R206 |
|-----|--|------|

SPECIAL COMMUNICATION

| | | |
|--------|--|------|
| 2,4,10 | Reproducibility of human vagal carotid baroreceptor-cardiac reflex responses <i>D. L. Eckberg, V. A. Convertino, J. M. Fritsch, and D. F. Doerr</i> | R215 |
|--------|--|------|

No. 2. AUGUST 1992

CATEGORY

| | | |
|--------|--|------|
| 1,4,11 | Regional cerebral blood flow and tissue oxygenation during hypocarbia in geese <i>P. E. Bickler and D. Julian</i> | R221 |
| 1,7 | Betaine transport in the gill of a marine mussel, <i>Mytilus californianus</i> <i>S. H. Wright, T. M. Wunz, and A. L. Silva</i> | R226 |
| 6,9 | Preferential retention of linoleic acid-enriched triacylglycerols in liver and serum during fasting <i>Z.-Y. Chen and S. C. Cunnane</i> | R233 |
| 1,5,11 | Relationship between blood O ₂ content and catecholamine levels during hypoxia in rainbow and American eel <i>S. F. Perry and S. D. Reid</i> | R240 |

| | | |
|---------|---|------|
| 6,3,9 | Underfeeding and body weight regulation in normal-weight young men <i>M. B. Heyman, V. R. Young, P. Fuss, R. Tsay, L. Joseph, and S. B. Roberts</i> | R250 |
| 2,4,5 | Nucleus tractus solitarius and control of blood pressure in chronic sinoaortic denervated rats <i>A. M. Schreihöfer and A. F. Sved</i> | R258 |
| 11,12 | Effects of hypoxia and ambient temperature on gaseous metabolism of newborn rats <i>J. P. Mortola and A. Dotta</i> | R267 |
| 1,5,7 | Effects of atrial natriuretic peptides on metabolism of arginine vasopressin by isolated perfused rat kidney <i>M. R. Lebowitz, A. M. Moses, and S. J. Scheinman</i> | R273 |
| 5,7 | Atrial natriuretic peptide inhibits amiloride-sensitive sodium uptake in rat brain <i>F. Kanda, P. Sarnacki, and A. I. Arieff</i> | R279 |
| 2,4,9 | Surgical and pharmacological dissociation of cardiovascular and emetic responses to intragastric CuSO ₄ <i>M. T. Makale and G. L. King</i> | R284 |
| 2,10,11 | Entrainment of respiratory rhythm by periodic lung inflation: effect of airflow rate and duration <i>S. Muzzin, P. Baconnier, and G. Benchetrit</i> | R292 |
| 4,5,7 | Rat brain natriuretic peptide is localized in atrial granules and released into the circulation <i>G. Thibault, C. Charbonneau, J. Bilodeau, E. L. Schiffrin, and R. Garcia</i> | R301 |
| 4,2 | Chemoreceptor and baroreceptor responses of A1 area neurons projecting to supraoptic nucleus <i>Y.-W. Li, Z. J. Gieroba, and W. W. Blessing</i> | R310 |
| 2,4,5 | Carotid baroreflexes and plasma vasopressin in humans during head-up tilt <i>M. Kamegai, M. S. Kristensen, J. Warberg, and P. Norsk</i> | R318 |
| 1,2,4 | Excitatory amino acids may mediate nucleus tractus solitarius input to rat parabrachial neurons <i>J. H. Jhamandas and K. H. Harris</i> | R324 |
| 2 | Neural regulation of the vas deferens in the rat: an electrophysiological analysis <i>S. C. Kolbeck and W. D. Steers</i> | R331 |
| 11,10 | Weakness of short-term synchronization among respiratory nerve activities during fictive vomiting <i>M. I. Cohen, A. D. Miller, R. Barnhardt, and C.-F. Shaw</i> | R339 |
| 6 | Divergent effects of intravenous GSH and cysteine on renal and hepatic GSH <i>S. Aebi and B. H. Lauterburg</i> | R348 |
| 6,10,12 | Daily torpor in the absence of the suprachiasmatic nucleus in Siberian hamsters <i>N. F. Ruby and I. Zucker</i> | R353 |
| 4,5,7 | Catecholamine depletion of the diagonal band reduces baroreflex inhibition of supraoptic neurons <i>J. T. Cunningham, R. Nissen, and L. P. Renaud</i> | R363 |
| 2,4,11 | Arterial chemoreceptor input to nucleus tractus solitarius <i>S. W. Mifflin</i> | R368 |
| 4,5 | Vasopressin and fetal cerebrovascular regulation <i>J. C. Eisenach, C. Tong, D. A. Stump, and S. M. Block</i> | R376 |
| 5,7,4 | Effect of hypotension and hyperosmolality on vasopressin and ACTH responses to hypoglycemia in conscious dogs <i>H. Raff, P. E. Papanek, and A. W. Cowley, Jr.</i> | R382 |
| 1,6,9 | Bile is essential for lipid assimilation in Leach's storm petrel, <i>Oceanodroma leucorhoa</i> <i>A. R. Place</i> | R389 |
| 4,5 | Purification and biological activity of alligator bradykinin <i>S. Comeau, V. A. Lance, J. W. Hicks, and J. M. Conlon</i> | R400 |
| 2,4 | β -Adrenoceptor modulation of renin response to short-term reductions in pressure in young SHR <i>J. P. Porter</i> | R405 |
| 4,2 | Renal afferent input to the ventrolateral medulla of the cat <i>M. A. Vizzard, A. Standish, and W. S. Ammons</i> | R412 |

| | | |
|-------|---|------|
| 12,5 | Endotoxin-induced fever is modulated by endogenous glucocorticoids in rats <i>M. M. Coelho, G. E. P. Souza, and I. R. Pelá</i> | R423 |
| 10,12 | High-intensity light for circadian adaptation to a 12-h shift of the sleep schedule <i>C. I. Eastman</i> | R428 |
| 2,4 | Splanchnic nerve response to A5 area stimulation in rats <i>D. Huangfu, L.-J. Huang, T. A. Riley, and P. G. Guyenet</i> | R437 |
| 5,4 | Dexamethasone stimulates release of an ANP-like substance from rainbow trout cardiocytes <i>W. H. Powell and H. A. Miller, III</i> | R447 |
| 3,5,9 | Cholecystokinin (CCK-8) affects gastric pressure and ratings of hunger and fullness in women <i>P. M. Melton, H. R. Kissileff, and F. X. Pi-Sunyer</i> | R452 |

No. 3. SEPTEMBER 1992

CATEGORY

INTESTINAL TRANSPORT

| | | |
|-------|---|------|
| | Introduction: intestinal nutrient transport—a comparative approach <i>R. Buddington</i> | R457 |
| 1,6,9 | Vertebrate intestine apical membrane mechanisms of organic nutrient transport <i>B. R. Stevens</i> | R458 |
| 1,6,9 | Comparative aspects of lipid digestion and absorption: physiological correlates of wax ester digestion <i>A. R. Place</i> | R464 |
| 1,8 | Invertebrate gut diverticula are nutrient absorptive organs <i>G. A. Ahearn, G. A. Gerencser, M. Thamocharan, R. D. Behnke, and T. H. Lemme</i> | R472 |
| 1,9,6 | Role of intestinal basolateral membrane in absorption of nutrients <i>C. Cheeseman</i> | R482 |
| 1 | Molecular biology approaches to comparative study of Na ⁺ -glucose cotransport <i>A. M. Pajor, B. A. Hirayama, and E. M. Wright</i> | R489 |
| 1,9 | Tests of the adaptive modulation hypothesis for dietary control of intestinal nutrient transport <i>W. H. Karasov</i> | R496 |
| 1,9 | Intestinal nutrient transport during ontogeny of vertebrates <i>R. K. Buddington</i> | R503 |
| 4,7 | Role of endothelium-derived nitric oxide in the renal hemodynamic response to amino acid infusion <i>C. Chen, K. D. Mitchell, and L. G. Navar</i> | R510 |
| 1,9 | Maintenance of intestinal nutrient transport during hibernation <i>H. V. Carey and N. S. Sills</i> | R517 |
| 2,4 | Arterial baroreflex dynamics in normotensive and spontaneously hypertensive rats <i>S. Harada, T. Imaizumi, S.-I. Ando, Y. Hirooka, K. Sunagawa, and A. Takeshita</i> | R524 |
| 4,5,7 | Physiological concentrations of ANP exert a dual regulatory influence on renin release in conscious dogs <i>H. Ehmke, P. B. Persson, A. Just, B. Nafz, M. Seyfarth, E. Hackenthal, and H. R. Kirchheim</i> | R529 |
| 4,5,7 | Interactions of physiological and pharmacological concentrations of ANP and angiotensin II in conscious dogs <i>R. Kuhlen, H. Seibt, R. Engel, and G. Kaczmarczyk</i> | R537 |
| 2 | Hypothalamic and cortical sympathetic responses relay in the medulla of the rat <i>D. F. Cechetto and S. J. Chen</i> | R544 |
| 4,5,7 | Ca ²⁺ -related hepatocellular alterations during intra-abdominal sepsis <i>S. Rose, K. D. Thompson, and M. M. Sayeed</i> | R553 |
| 9,3 | The effect of dietary fat on diet selection may involve central serotonin <i>B. J. Mullen and R. J. Martin</i> | R559 |

| | | |
|---------|--|------|
| 2,10 | Forced oscillations in sympathetic nerve discharge <i>Z.-S. Huang, G. L. Gebber, S. Zhong, and S. M. Barman</i> | R564 |
| 9,3,1 | Low-dose near-celiac arterial cholecystokinin suppresses food intake in rats <i>N. Calingasan, S. Ritter, R. Ritter, and L. Brenner</i> | R572 |
| 4,6,12 | Placental glucose transport in heat-induced fetal growth retardation <i>P. J. Thureen, K. A. Trembler, G. Meschia, E. L. Makowski, and R. B. Wilkening</i> | R578 |
| 8 | Muscle, joint, and tendon contributions to the torque profile of frog hip joint <i>R. L. Lieber and S. D. Shoemaker</i> | R586 |
| 9,3,2 | Both CCK-A and CCK-B/gastrin receptors are present on rabbit vagus nerve <i>C. W. Lin and T. R. Miller</i> | R591 |
| 12,3 | Effective loci and roles of acetylcholine in temperature regulation of goldfish <i>L. I. Crawshaw and L. P. Wollmuth</i> | R596 |
| 1,4 | Development of blood pressure and cardiac reflexes in the frog <i>Pseustes paradoxus</i> <i>W. W. Burggren, J. E. Bicudo, M. L. Glass, and A. S. Abe</i> | R602 |
| 7 | Unique electrophysiological effects of dinitrophenol in Malpighian tubules <i>T. L. Pannabecker, D. J. Aneshansley, and K. W. Beyenbach</i> | R609 |
| 2,5,9 | Parasympathetic involvement in rapid meal-associated conditioned insulin secretion in the rat <i>J. H. Strubbe</i> | R615 |
| 8,11 | Ontogeny of fetal hepatic and placental growth and metabolism in sheep <i>I. Vatnick and A. W. Bell</i> | R619 |
| 11,10,9 | Coordination of respiration and swallowing: effect of bolus volume in normal adults <i>H. G. Preiksaitis, S. Mayrand, K. Robins, and N. E. Diamant</i> | R624 |
| 2,4,7 | Ontogeny of DA ₁ receptor-mediated natriuresis in the rat: in vivo and in vitro correlations <i>S. Kaneko, F. Albrecht, L. D. Asico, G. M. Eisner, J. E. Robillard, and P. A. Jose</i> | R631 |
| 2,4 | Arterial pressure lability and renal sympathetic nerve activity are dissociated in SAD rats <i>C. Barres, S. J. Lewis, H. J. Jacob, and M. J. Brody</i> | R639 |
| 4,5,7 | Effect of physical exercise in hypobaric conditions on atrial natriuretic peptide secretion <i>O. Vuolteenaho, P. Koistinen, V. Martikkala, T. Takala, and J. Leppäluoto</i> | R647 |
| 1,5,12 | Human IL-1 receptor antagonist partially suppresses LPS fever but not plasma levels of IL-6 in Fischer rats <i>B. K. Smith and M. J. Kluger</i> | R653 |
| 3,5,9 | Behavioral and tissue responses to severe phosphorus depletion in cattle <i>J. R. Blair-West, D. A. Denton, M. J. McKinley, B. G. Radden, E. H. Ramshaw, and J. D. Wark</i> | R656 |
| 4,5 | Hypoxia attenuates the renin response to hemorrhage <i>M. R. Eichinger and J. R. Claybaugh</i> | R664 |
| 12 | Regional interactions between thermosensitive neurons in diencephalic slices <i>J. B. Dean, M. L. Kaple, and J. A. Boulant</i> | R670 |
| 12 | Delayed firing rate responses to temperature in diencephalic slices <i>J. B. Dean and J. A. Boulant</i> | R679 |
| 6 | Determining energy expenditure in preterm infants: comparison of ² H ₂ ¹⁸ O method and indirect calorimetry <i>C. L. Jensen, N. F. Butte, W. W. Wong, and J. K. Moon</i> | R685 |
| 1,2,4 | Baroreflex control of arterial blood pressure during involuntary diving in ducks (<i>Anas platyrhynchos</i> var.) <i>F. M. Smith and D. R. Jones</i> | R693 |
| 3,9,12 | Tumor necrosis factor- β induces sleep, fever, and anorexia <i>L. Kapás and J. M. Krueger</i> | R703 |
| 3,9,12 | Somnogenic, pyrogenic, and anorectic activities of tumor necrosis factor- α and TNF- α fragments <i>L. Kapás, L. Hong, A. B. Cady, M. R. Opp, A. E. Postlethwaite, J. M. Seyer, and J. M. Krueger</i> | R708 |

- 2,4,5 Selective activation of norepinephrine- and epinephrine-secreting chromaffin cells in rat adrenal medulla
R. R. Vollmer, A. Baruchin, S. S. Kolibal-Peghet, S. P. Corey, E. M. Stricker, and B. B. Kaplan R716
- 2,5,6 Habituation of lactate release responding to stressful stimuli in rat prefrontal cortex in vivo
M. Takita, M. Mikuni, and K. Takahashi R722

SPECIAL COMMUNICATION

- 4,7,1 Microsphere and dilution techniques for the determination of blood flows and volumes in conscious mice
R. W. Barbee, B. D. Perry, R. N. Ré, and J. P. Murgio R728

RAPID COMMUNICATIONS

- 5,7 Pathobiology of magnesium deficiency: a cytokine/neurogenic inflammation hypothesis
W. B. Weglicki and T. M. Phillips R734
- 5 Alterations in oxytocin prohormone processing during early development in the fetal sheep
M. Morris, M. Castro, and J. C. Rose R738

No. 4. OCTOBER 1992

CATEGORY

- 1,4,11 Digital image analysis of shark gills: modeling of oxygen transfer in the domain of time
V. Bhargava, N. C. Lai, J. B. Graham, S. C. Hempleman, and R. Shabetai R741
- 4,5 Atrial natriuretic factor binding sites in rat area postrema: autoradiographic study
E. M. Konrad, G. Thibault, and E. L. Schiffrin R747
- 4,5,7 Vasopressin and angiotensin II in reflex regulation of heart rate: effect of water deprivation
V. L. Brooks R756
- 4,5,7 Vasopressin and angiotensin II in reflex regulation of ACTH, glucocorticoids, and renin: effect of water deprivation
V. L. Brooks and L. C. Keil R762
- 1,2,5 Roles of catecholamines and corticosterone during anoxia and recovery at 5°C in turtles
K. M. Keiver, J. Weinberg, and P. W. Hochachka R770
- 1,3,5 Stress in birds due to routine handling and a technique to avoid it
Y. Le Maho, H. Karmann, D. Briot, Y. Handrich, J.-P. Robin, E. Mioskowski, Y. Cherel, and J. Farni R775
- 1,5 Early insulin response after food intake in geese
H. Karmann, N. Rideau, T. Zorn, A. Malan, and Y. Le Maho R782
- 6,5,9 Whole body insulin sensitivity in Osborne-Mendel and S 5B/Pl rats eating a low- or high-fat diet
T. A. Buchanan, J. S. Fiser, S. Underberger, G. F. Sipos, and G. A. Bray R785
- 3,6,9 Reversal of high-fat diet-induced obesity in female rats
T. J. Bartness, D. R. Polk, W. R. McGriff, T. G. Youngstrom, and M. DiGirolamo R790
- 1,4,6 Metabolic state of the in situ perfused trout heart during severe hypoxia
P. G. Arthur, J. E. Keen, P. W. Hochachka, and A. P. Farrell R798
- 2,3,9 Injection of cobalt protoporphyrin into the medial nuclei of the hypothalamus elicits weight loss
R. A. Galbraith, L.-M. Kow, D. Pfaff, and A. Kappas R805
- 2,9 Dynamics of gastric emptying during and after stomach fill
J. M. Kaplan, A. C. Spector, and H. J. Grill R813
- 6,1 Effect of reproductive function on cold tolerance in deer mice
J. L. Blank and T. Ruf R820
- 7,8 Calcium channel blockers inhibit amiloride-stimulated short-circuit current in frog tadpole skin
T. C. Cox R827

| | | |
|--------|--|------|
| 4 | Cerebrovascular and coronary effects of endothelin-1 in the goat <i>G. Diéguez, J. L. García, N. Fernández, A. L. García-Villalón, L. Monge, and B. Gomez</i> | R834 |
| 5 | Interleukin-1 stimulates aldosterone secretion: involvement of renin, ACTH, and prostaglandins <i>A. Bataillard, A. del Rey, I. Klusman, G. M. Arditi, and H. O. Besedovsky</i> | R840 |
| 4,2 | Hemodynamic effects of central angiotensin I, II, and III in conscious rabbits <i>G. A. Head and N. S. Williams</i> | R845 |
| 9 | Does reducing the rate or efficiency of digestion reduce food intake? <i>I. Ramirez</i> | R852 |
| 1,5,6 | Control of adipose tissue lipolysis in ectotherm vertebrates <i>R. H. Migliorini, J. S. Lima-Verde, C. R. Machado, G. M. P. Cardona, M. A. R. Garofalo, and I. C. Kettelhut</i> | R857 |
| 5,9 | Intraventricular CCK-8 reduces single meal size in the baboon by interaction with type-A CCK receptors <i>D. P. Figlewicz, A. M. Nadzan, A. J. Sipols, P. K. Green, R. A. Liddle, D. Porte, Jr., and S. C. Woods</i> | R863 |
| 5,7 | Ontogeny of renal response to specific dopamine DA ₁ -receptor stimulation in sheep <i>J. L. Segar, F. G. Smith, E. N. Guillery, P. A. Jose, and J. E. Robillard</i> | R868 |
| 2,4 | Effects of CGRP on baroreflex control of heart rate and renal sympathetic nerve activity in rabbits <i>H. Okamoto, S. Hoka, T. Kawasaki, M. Sato, and J. Yoshitake</i> | R874 |
| 4,5,7 | Effect of age and blood pressure on the heart rate, vasopressin, and renin response to hypoxia in fetal sheep <i>H. Raff and C. E. Wood</i> | R880 |
| 9,3,2 | Clonidine in the prepyriform cortex blocked anorectic response to amino acid imbalance <i>D. W. Gietzen and J. L. Beverly, III</i> | R885 |
| 4,6,7 | Elevated muscle acidity and energy production during exhaustive exercise in humans <i>J. Bangsbo, T. Graham, L. Johansen, S. Strange, C. Christensen, and B. Saltin</i> | R891 |
| 1,8 | Developmental changes in hindlimb muscles and diaphragm of sheep <i>D. Finkelstein, P. Andrianakis, A. R. Luff, and D. W. Walker</i> | R900 |
| 3,7 | Platelet-activating factor antagonists limit glycine changes and behavioral deficits after brain trauma <i>A. I. Faden and P. A. Tzengzalian</i> | R909 |
| 12,3,2 | Potentialiation of thermoregulatory responses to isoproterenol by β -adrenergic antagonists <i>H. J. Carlisle and M. J. Stock</i> | R915 |
| 4,7 | Iron uptake in relation to transferrin degradation in brain and other tissues of rats <i>M. E. Strahan, A. Crowe, and E. H. Morgan</i> | R924 |
| 7 | Gestational changes in Ca ²⁺ transport across rat placenta and mRNA for calbindin _{9K} and Ca ²⁺ -ATPase <i>J. D. Glazier, D. E. Atkinson, K. L. Thornburg, P. T. Sharpe, D. Edwards, R. D. H. Boyd, and C. P. Sibley</i> | R930 |
| 5,10 | Adrenal corticosteroid secretion in fetal sheep: pulsatile pattern at rest <i>B. T. Jackson, A. F.-S. Lee, S. H. Morrison, R. M. Baker, H. E. Cohn, and G. J. Piasecki</i> | R936 |
| 4,7 | Tissue-specific effects of physiological ANP infusion on blood-tissue albumin transport <i>V. L. Tucker, K. E. Simanonok, and E. M. Renkin</i> | R945 |
| 4,5,1 | Indomethacin attenuates exercise-induced proteinuria in hypertensive miniature swine <i>K. P. O'Hagan, D. F. Hora, Jr., and E. J. Zambraski</i> | R954 |
| 11,2 | A network model of respiratory rhythmogenesis <i>M. D. Ogilvie, A. Gottschalk, K. Anders, D. W. Richter, and A. I. Pack</i> | R962 |
| 4,9 | Enzyme-linked immunosorbent assay of colostral IgG transported into lymph and plasma in neonatal pigs <i>H. Kiriyaama</i> | R976 |

RAPID COMMUNICATION

| | | |
|--------|--|------|
| 3,5,10 | Aging alters feedback effects of the activity-rest cycle on the circadian clock <i>O. Van Reeth, Y. Zhang, P. C. Zee, and F. W. Turek</i> | R981 |
|--------|--|------|

CATEGORY

- 12 Systemic injection of TNF- α attenuates fever due to IL-1 β and LPS in rats
N. C. Long, A. Morimoto, T. Nakamori, and N. Murakami R987
- 6,8 Exhaustive physical exercise causes oxidation of glutathione status in blood: prevention by antioxidant administration
J. Sastre, M. Asensi, E. Gascó, F. V. Pallardó, J. A. Ferrero, T. Furukawa, and J. Viña R992
- 5,9,8 Precocious cessation of intestinal macromolecular transport by synthetic trypsin inhibitor in suckling rats
E. Harada, Y. Hashimoto, and B. Syuto R996
- 1,6,12 Characterization of norepinephrine-stimulated protein synthesis in rat brown adipocytes
D. Waldbillig and M. Desautels R1003
- 2,9 Duodenal preabsorptive origin of gustatory alliesthesia in rats
M. Cabanac and L. Lafrance R1013
- 1,8 Kinetic heterogeneity of Na-D-glucose cotransport in teleost gastrointestinal tract
G. A. Ahearn, R. D. Behnke, V. Zonno, and C. Storelli R1018
- 4,11 Pulmonary vascular response to anaphylaxis in isolated canine lungs
T. Shibamoto, T. Hayashi, Jr., F. Sawano, Y. Saeki, Y. Matsuda, M. Kawamoto, and S. Koyama R1024
- 2,5,4 Sex differences in central cholinergic and angiotensinergic control of vasopressin release
J. D. Stone, J. T. Crofton, and L. Share R1030
- 4 Heparin suppresses endothelin-1 action and production in spontaneously hypertensive rats
K. Yokokawa, A. K. Mandal, M. Kohno, T. Horio, K.-I. Murakawa, K. Yasunari, and T. Takeda R1035
- 1,12,3 Morphological and physiological correlates with swimming performance in juvenile largemouth bass
A. S. Kolok R1042
- 4,7 Cardiovascular responses to nasal water flow in rats are unaffected by chemoreceptor drive
P. F. McCulloch and N. H. West R1049
- 6,11,4 Membrane and synaptic activity during anoxia in the isolated turtle cerebellum
M. A. Pérez-Pinzón, C. Y. Chan, M. Rosenthal, and T. J. Sick R1057
- 4,7 Renal medullary interstitial infusion of diltiazem alters sodium and water excretion in rats
S. Lu, R. J. Roman, D. L. Mattson, and A. W. Cowley, Jr. R1064
- 2,4,5 Role of right heart receptors in the control of renin, vasopressin, and cortisol secretion in dogs
D. H. Carr, D. B. Jennings, T. N. Thrasher, L. C. Keil, and D. J. Ramsay R1071
- 3,5,12 Growth hormone-releasing hormone antibodies suppress sleep and prevent enhancement of sleep after sleep deprivation
F. Obál, Jr., L. Payne, M. Opp, P. Alfoldi, L. Kapás, and J. M. Krueger R1078
- 1 Role of intracellular calcium in renal proximal tubule cell volume regulation
D. A. Terreros and H. Kanli R1086
- 6,11 Exercise-induced cellular alterations in the diaphragm
S. K. Powers, D. Criswell, F.-K. Lieu, S. Dodd, and H. Silverman R1093
- 1,3,10 Effects of aging on entrainment and rate of resynchronization of circadian locomotor activity
P. C. Zee, R. S. Rosenberg, and F. W. Turek R1099
- 2,4,5 Reflex cardiovascular response to exercise is modulated by circulating vasopressin
C. L. Stebbins R1104
- 10 Irradiance responsivity and unequivocal type-1 phase responsivity of rat circadian activity rhythms
M. S. Bauer R1110
- 2,3,12 Influenza virus-induced changes in rabbit sleep and acute phase responses
M. Kimura-Takeuchi, J. A. Majde, L. A. Toth, and J. M. Krueger R1115

- 5,7 Modulation of glucose metabolic response to endotoxin by granulocyte colony-stimulating factor
C. H. Lang, G. J. Bagby, C. Dobrescu, S. Nelson, and J. J. Spitzer R1122
- 6,11 Metabolic adaptation of fetal hindlimb to severe, nonlethal hypoxia
D. W. Boyle, G. Meschia, and R. B. Wilkening R1130
- 7 Effect of kinin receptor antagonists on renal hemodynamic and natriuretic responses to volume expansion
F. J. Fenoy and R. J. Roman R1136
- 4,7,5 Steady-state arterial pressure-urinary output relationships during ovine pregnancy
E. W. Quillen, Jr. and B. S. Nuwayhid R1141
- 2,4,5 Sympathoadrenal-circulatory regulation of arterial pressure during orthostatic stress in young and older men
J. A. Taylor, G. A. Hand, D. G. Johnson, and D. R. Seals R1147
- 4,2 Nitric oxide participates in the cerebrovasodilation elicited from cerebellar fastigial nucleus
C. Iadecola R1156
- Changes in regulation of human zinc metabolism with age
M. E. Wastney, S. Ahmed, and R. I. Henkin R1162

No. 6. DECEMBER 1992

CATEGORY

- 3,9,10 Advance shift of feeding circadian rhythm induced by obesity progression in Zucker rats
K. Fukagawa, T. Sakata, H. Yoshimatsu, K. Fujimoto, K. Uchimura, and C. Asano R1169
- 2,12 Role of sympathetic innervation in brown adipocyte proliferation
A. Gélœn, A. J. Collet, and L. J. Bukowiecki R1176
- 7 Intrarenal pressures during direct inhibition of sodium transport
A. A. Khraibi, J. P. Granger, J. A. Haas, J. C. Burnett, Jr., and F. G. Knox R1182
- 2,4 Vasopressin-induced suppression of renal sympathetic outflow depends on the number of baroafferent inputs in rabbits
Y. Nishida and V. S. Bishop R1187
- 2,4 Medullary pathway of the Bezold-Jarisch reflex in the rat
A. J. M. Verberne and P. G. Guyenet R1195
- 7,9 Effects of fasting and hibernation on ion secretion in ground squirrel intestine
H. V. Carey R1203
- 7,9 Intestinal secretion after jejunal bypass in the ground squirrel
H. V. Carey and H. J. Cooke R1209
- 5,9,12 Cholecystokinin reduces body temperature in vehicle- but not capsaicin-pretreated rats
E. H. South R1215
- 3,5,9 Interferons and central regulation of feeding
C. R. Plata-Salamán R1222
- 2,6 Effects of ventromedial hypothalamic stimulation on glucose transport system in rat tissues
A. Takahashi, M. Sudo, Y. Minokoshi, and T. Shimazu R1228
- 12,2,10 A critical role for central vasopressin in regulation of fever during bacterial infection
R. A. Cridland and N. W. Kasting R1235
- 1,5,6 Effects of estrogen on whole animal and tissue glucose use in female and male rainbow trout
B. S. Washburn, M. L. Bruss, E. H. Avery, and R. A. Freedland R1241
- 6,2 Adipose tissue lipolysis in vitro: a predictor of diet-induced obesity in female rats
T. E. Landerholm and J. S. Stern R1248
- 7 Luminal pH in the amphibian distal tubule: effects of carbonic anhydrase and carbonic anhydrase inhibitors
G. Planelles, F. Discala, and T. Anagnostopoulos R1254
- 4 Normobaric hypoxia stimulates endothelin-1 gene expression in the rat
T. S. Elton, S. Oparil, G. R. Taylor, P. H. Hicks, R.-H. Yang, H. Jin, and Y. F. Chen R1260

| | | |
|---------|--|-------|
| 2,4,7 | Do renal nerves chronically influence renal function and arterial pressure in spinal rats? <i>K. A. Trostel and J. W. Osborn</i> | R1265 |
| 7,11 | Metabolic and respiratory effects of infused sodium acetate in healthy human subjects <i>P. Burnier, L. Tappy, E. Jéquier, D. Schneeberger, and R. Chioléro</i> | R1271 |
| 4,7,9 | AV3V lesion impairs responses induced by cholinergic activation of SFO in rats <i>D. S. de Almeida Colombari, W. A. Saad, L. A. de Arruda Camargo, A. Renzi, L. A. De Luca, Jr., E. Colombari, and J. V. Menani</i> | R1277 |
| 8 | Detrusor hyperplasia and expression of "immediate early" genes with onset of abnormal urodynamic parameters <i>O. M. A. Karim, N. Seki, and J. L. Mostwin</i> | R1284 |
| 1,2,4 | Adrenergic vasomotor responses in nasal mucosa of hooded seals <i>L. P. Folkow</i> | R1291 |
| 1 | Cerebral anoxia tolerance in turtles: regulation of intracellular calcium and pH <i>P. E. Bickler</i> | R1298 |
| 2,4,7 | ANP-mediated volume depletion attenuates renal responses in humans <i>T. J. Ebert, L. Groban, M. Muzi, M. Hanson, and A. W. Cowley, Jr.</i> | R1303 |
| 4,6,11 | Metabolic responses to forced dives in Pekin duck measured by indirect calorimetry and ³¹ P-MRS <i>R. Stephenson and D. R. Jones</i> | R1309 |
| 9 | In vivo longitudinal variations in protein synthesis in developing ovine intestines <i>D. Attaix, E. Aurousseau, D. Rosolowska-Huszcz, G. Bayle, and M. Arnal</i> | R1318 |
| 5,6 | Sepsis- and endotoxin-induced increase in organ glucose uptake in leukocyte-depleted rats <i>C. H. Lang, G. J. Bagby, C. Dobrescu, A. Ottlakan, and J. J. Spitzer</i> | R1324 |
| 2,4,5 | Angiotensin II receptor activation depolarizes rat supraoptic neurons in vitro <i>C. R. Yang, M. I. Phillips, and L. P. Renaud</i> | R1333 |
| 3,10,12 | Modulation of sleep by cortisone in normal and bacterially infected rabbits <i>L. A. Toth, T. W. Gardiner, and J. M. Krueger</i> | R1339 |

RAPID COMMUNICATIONS

| | | |
|-------|--|-------|
| 5,7,9 | Central oxytocin inhibition of angiotensin-induced salt appetite in rats <i>R. E. Blackburn, A. D. Demko, G. E. Hoffman, E. M. Stricker, and J. G. Verbalis</i> | R1347 |
| 9,5 | Abdominal vagal mediation of the satiety effects of exogenous and endogenous cholecystokinin in rats <i>R. D. Reidelberger</i> | R1354 |

| | |
|-----------------------------------|-------|
| <i>Subject Index to Volume 32</i> | R1359 |
| <i>Author Index to Volume 32</i> | R1371 |

American Journal of Physiology: Renal, Fluid and Electrolyte Physiology

No. 1. JULY 1992

| | |
|---|------|
| ANF and bradykinin synergistically inhibit transport in M-1 cortical collecting duct cell line <i>B. A. Stoos, O. A. Carretero, and J. L. Garvin</i> | F1 |
| Localization of mRNAs coding for isozymes of plasma membrane Ca^{2+} -ATPase pump in rat kidney <i>M. Magocsi, M. Yamaki, J. T. Penniston, and T. P. Dousa</i> | F7 |
| Bidirectional peritoneal transport of immunoglobulin in rats: tissue concentration profiles <i>M. F. Flessner, R. L. Dedrick, and J. C. Reynolds</i> | F15 |
| Effects of glucagon on glomerular filtration rate and urea and water excretion <i>M. Ahloulay, N. Bouby, F. Machet, M. Kubrusly, C. Coutaud, and L. Bankir</i> | F24 |
| Effects of formate and oxalate on volume absorption in rat proximal tubule <i>T. Wang, G. Giebisch, and P. S. Aronson</i> | F37 |
| H-K-ATPase enhancement of Rb efflux by cortical collecting duct <i>X. Zhou and C. S. Wingo</i> | F43 |
| Renal acid-base physiology in marine teleost, the long-horned sculpin (<i>Myoxocephalus octodecimspinosus</i>) <i>T. H. Maren, A. Fine, E. R. Swenson, and D. Rothman</i> | F49 |
| Effect of selenium-deficient diet in experimental glomerular disease <i>R. Baliga, M. Baliga, and S. V. Shah</i> | F56 |
| Functional and structural characterization of endosomes from toad bladder epithelial cells <i>M. L. Zeidel, T. Hammond, B. Botelho, and H. W. Harris, Jr.</i> | F62 |
| Renal kinin antagonism does not impair pressure-induced natriuresis <i>D. M. Strick, M. J. Fiksen-Olsen, O. A. Carretero, and J. C. Romero</i> | F77 |
| Effects of chronic metabolic acidosis on Na^+ - H^+ exchangers in LLC-PK ₁ renal epithelial cells <i>P. Igarashi, M. I. Freed, M. B. Ganz, and R. F. Reilly</i> | F83 |
| Renal receptors for atrial and C-type natriuretic peptides in the rat <i>J. Brown and Z. Zuo</i> | F89 |
| Regulation of mesangial cell cyclooxygenase synthesis by cytokines and glucocorticoids <i>D. W. Coyne, M. Nickols, W. Bertrand, and A. R. Morrison</i> | F97 |
| Effects of endothelin on renal hemodynamics and tubuloglomerular feedback <i>T. Takabatake, T. Ise, K. Ohta, and K. Kobayashi</i> | F103 |
| Oligopeptides: mechanism of renal clearance depends on molecular structure <i>H. Minami, H. Daniel, E. L. Morse, and S. A. Adibi</i> | F109 |
| Eicosanoids modulate apical Ca^{2+} -dependent K^+ channels in cultured rabbit principal cells <i>B. N. Ling, C. L. Webster, and D. C. Eaton</i> | F116 |
| Regulation of S6 kinase activity in renal proximal tubule <i>R. C. Harris</i> | F127 |
| Activation of proximal tubular Na^+ - H^+ exchange by angiotensin II <i>R. D. Bloch, D. Zikos, K. A. Fisher, L. Schleicher, M. Oyama, J.-C. Cheng, H. A. Skopicki, E. J. Sukowski, E. J. Cragoe, Jr., and D. R. Peterson</i> | F135 |
| Hormonal regulation of rat renal proximal tubule brush-border membrane ionic permeability <i>M. S. Lipkowitz, R. D. London, J. C. Beck, and R. G. Abramson</i> | F144 |
| Increased functional differentiation of rabbit proximal tubule cells cultured in glucose-free media <i>A. Blais, F. Jalal, P. Crine, J. Paiement, and A. Berteloot</i> | F152 |
| Cytoplasmic dilution induces antidiuretic hormone water channel retrieval in toad urinary bladder <i>H. W. Harris, Jr., B. Botelho, M. L. Zeidel, and K. Strange</i> | F163 |

RAPID COMMUNICATION

Sites of antinatriuretic action of insulin along rat nephron

E. Féraille, S. Marsy, L. Cheval, C. Barlet-Bas, C. Khadouri,
H. Favre, and A. Doucet

F175

No. 2. AUGUST 1992

EDITORIAL REVIEW

Prostanoid biosynthesis and mechanisms of action

W. L. Smith

F181

Reconstitution and partial purification of calcium transport activity
from rat kidney cortex

K. Sugimura, J. Abramowitz, Y. Tsukamoto, and W. N. Suki

F192

Lipid peroxidation in isolated rat nephron segments

H. Ha and H. Endou

F201

Role of endothelium-derived relaxing factor in renal autoregulation in conscious dogs

J. E. Baumann, P. B. Persson, H. Ehmke, B. Nafz, and H. R. Kirchheim

F208

Role of intracellular calcium in hydrogen peroxide-induced renal tubular cell injury

N. Ueda and S. V. Shah

F214

Comparative effects of arginine vasopressin and oxytocin in cell culture systems

V. A. Briner, P. Tsai, H. L. Choong, and R. W. Schrier

F222

Paradoxical exacerbation of leukocyte-mediated glomerulonephritis
with cyclooxygenase inhibition

T. Nagamatsu, J. Pippin, G. F. Schreiner, and J. B. Lefkowitz

F228

Coordinate development of oxidative enzymes and Na-K-ATPase in thick ascending
limb: role of corticosteroids

F. Djouadi, A. Wijkhuisen, and J. Bastin

F237

Chloride channels in apical and basolateral membranes of CCD cells
(RCCT-28A) in culture

P. Dietl and B. A. Stanton

F243

Xanthine oxidase produces O₂[•] in posthypoxic injury of renal epithelial cells

E. L. Greene and M. S. Paller

F251

Endothelium-derived relaxing factor regulates renin release in vivo

D. H. Sigmon, O. A. Carretero, and W. H. Beierwaltes

F256

Basolateral membrane potassium channels in rabbit cortical thick ascending limb

A. M. Hurst, M. Duplain, and J.-Y. Lapointe

F262

Differential effect of basolateral and apical adenosine on AVP-stimulated cAMP
formation in primary culture of IMCD

Y. Yagil

F268

Expression of vacuolar H⁺-ATPase in mouse osteoclasts during in vitro differentiation

Z.-Q. Wang, P. Hemken, D. Menton, and S. Gluck

F277

Filtration dynamics and natriuretic response to volume expansion in humans

N. Loon, A. Chagnac, L. Parra, K. Schmidt, W. M. Deen, and B. D. Myers

F284

Cellular variability in the development of tight junctions after activation
of protein kinase C

B. Ellis, E. E. Schneeberger, and C. A. Rabito

F293

Dual action of phosphonoformic acid on Na⁺-phosphate cotransport
in opossum kidney cells

M. Lohman-Adham and T. P. Dousa

F301

| | |
|---|------|
| Effect of ANG II receptor antagonist on albuminuria and renal function in passive Heymann nephritis <i>F. N. Hutchison and S. K. Webster</i> | F311 |
| Hormone and autacoid regulation of cAMP production in rat IMCD subsegments <i>Y. Maeda, Y. Terada, H. Nonoguchi, and M. A. Knepper</i> | F319 |
| Denervation inhibits early increase in $\text{Na}^+\text{-H}^+$ exchange after uninephrectomy but does not suppress hypertrophy <i>M. Mackovic-Basic, R. Fan, and I. Kurtz</i> | F328 |
| Both peripheral chylomicron catabolism and hepatic uptake of remnants are defective in nephrosis <i>G. A. Kaysen, L. Mehendru, X.-M. Pan, and I. Staprans</i> | F335 |
| Relationship between HCO_3^- transport and oxidative metabolism in rabbit proximal tubule <i>K. G. Dickman and L. J. Mandel</i> | F342 |

No. 3. SEPTEMBER 1992

| | |
|---|------|
| Cell volume regulation in rat thin ascending limb of Henle's loop <i>L. F. Onuchic, I. R. Arenstein, and A. G. Lopes</i> | F353 |
| Colocalization and release of angiotensin and renin in renal cortical cells <i>M. K. Hunt, S. P. Ramos, K. M. Geary, L. L. Norling, M. J. Peach, R. A. Gomez, and R. M. Carey</i> | F363 |
| Extracellular ATP stimulates proliferation of cultured mesangial cells via P_2 -purinergic receptors <i>E. Schulze-Lohoff, S. Zanner, A. Ogilvie, and R. B. Sterzel</i> | F374 |
| PAH/ α -KG countertransport stimulates PAH uptake and net secretion in isolated rabbit renal tubules <i>V. Chatsudhipong and W. H. Dantzler</i> | F384 |
| Insulin activates single amiloride-blockable Na channels in a distal nephron cell line (A6) <i>Y. Marunaka, N. Hagiwara, and H. Tohda</i> | F392 |
| Basolateral Na^+ -independent Cl^- - HCO_3^- exchange in primary cultures of rat IMCD cells <i>J. A. Kraut, D. Hart, and E. P. Nord</i> | F401 |
| Angiotensin II receptor subtypes in cultured rat renal mesangial cells <i>P. Ernsberger, J. Zhou, T. H. Damon, and J. G. Douglas</i> | F411 |
| In vitro perfusion of chinchilla thin limb segments: segmentation and osmotic water permeability <i>C.-L. Chou and M. A. Knepper</i> | F417 |
| Dietary protein modulates intrarenal distribution of renin and its mRNA during development <i>A. Tufro-McReddie, E. E. Arrizurieta, S. Brocca, and R. A. Gomez</i> | F427 |
| Renal hemodynamic actions of lipoxins in rats: a comparative physiological study <i>T. Katoh, K. Takahashi, D. K. DeBoer, C. N. Serhan, and K. F. Badr</i> | F436 |
| Glucocorticoids inhibit colonic aldosterone-induced conductive Na^+ absorption in adrenalectomized rat <i>C. P. Bastl, G. Schulman, and E. J. Cragoe, Jr.</i> | F443 |
| Potassium conductance regulation by pH during volume regulation in rabbit proximal convoluted tubules <i>J. S. Beck, S. Breton, G. Giebisch, and R. Laprade</i> | F453 |
| Cloning of a human kidney cDNA with similarity to the sodium-glucose cotransporter <i>R. G. Wells, A. M. Pajor, Y. Kanai, E. Turk, E. M. Wright, and M. A. Hediger</i> | F459 |
| Effects of reactive oxygen species on cultured rat mesangial cells and isolated rat glomeruli <i>I. Duque, C. García-Escribano, M. Rodríguez-Puyol, M. L. Díez-Marqués, J. M. López-Novoa, I. Arribas, L. Hernando, and D. Rodríguez-Puyol</i> | F466 |

| | |
|---|------|
| Feedback modulation of renal and hepatic erythropoietin mRNA in response to graded anemia and hypoxia <i>C. C. Tan, K.-U. Eckardt, J. D. Firth, and P. J. Ratcliffe</i> | F474 |
| Effects of adenosine on ion transport in rat medullary thick ascending limb <i>R. E. Beach and D. W. Good</i> | F482 |
| Cytoskeleton disruption and apical redistribution of proximal tubule Na ⁺ -K ⁺ -ATPase during ischemia <i>B. A. Molitoris, R. Dahl, and A. Geerdes</i> | F488 |
| Renal injury in obese Zucker rats: glomerular hemodynamic alterations and effects of enalapril <i>P. G. Schmitz, M. P. O'Donnell, B. L. Kasiske, S. A. Katz, and W. F. Keane</i> | F496 |
| Localization, synthetic regulation, and biology of renal atriopeptin-like prohormone <i>D. Ritter, J. Chao, P. Needleman, E. Tetens, and J. E. Greenwald</i> | F503 |
| Critical role of bicarbonate in calcium release from bone <i>D. A. Bushinsky and N. E. Sessler</i> | F510 |
| Induction of water diuresis by endothelin in rats <i>J. Schnermann, J. N. Lorenz, J. P. Briggs, and J. A. Keiser</i> | F516 |
| Enhanced intrarenal angiotensin II generation in response to obstruction of the pig ureter <i>J. Frøkiær, L. Knudsen, A. S. Nielsen, E. B. Pedersen, and J. C. Djurhuus</i> | F527 |
| Effect of cyclooxygenase inhibition on renal blood flow autoregulation in SHR <i>B. M. Iversen, F. I. Kvam, L. Mørkrid, I. Sekse, and J. Ofstad</i> | F534 |
| β_2 -Microglobulin induces calcium efflux from cultured neonatal mouse calvariae <i>S. M. Moe and S. M. Sprague</i> | F540 |
| Clearance receptor and neutral endopeptidase-mediated metabolism of atrial natriuretic factor <i>J. Okolicany, G. A. McEnroe, G. Y. Koh, J. A. Lewicki, and T. Maack</i> | F546 |
| Calorie restriction decreases microalbuminuria associated with aging in barrier-raised Fischer 344 rats <i>J. B. Van Liew, F. B. Davis, P. J. Davis, B. Noble, and L. L. Bernardis</i> | F554 |
| Three-dimensional reconstructed glomerular capillary network: blood flow distribution and local filtration <i>A. Remuzzi, B. M. Brenner, V. Pata, G. Tebaldi, R. Mariano, A. Belloro, and G. Remuzzi</i> | F562 |

No. 4. OCTOBER 1992

| | |
|--|------|
| Impaired ability of prostaglandins to buffer renal vasoconstriction in genetically hypertensive rats <i>C. Chatziantoniou and W. J. Arendshorst</i> | F573 |
| ANF inhibits norepinephrine-stimulated fluid absorption in rat proximal straight tubules <i>J. L. Garvin</i> | F581 |
| Effect of cold exposure and nutrient intake on sympathetic nervous system activity in rat kidney <i>P. A. Daly, J. B. Young, and L. Landsberg</i> | F586 |
| Effects of dietary protein and salt on rat renal osmolytes: covariation in urea and GPC contents <i>D. P. Peterson, K. M. Murphy, R. Ursino, K. Streeter, and P. H. Yancey</i> | F594 |
| Intrarenal handling of proteins in rats using fractional micropuncture technique <i>A. Tojo and H. Endou</i> | F601 |
| Endothelin-1 is an autocrine factor in rat inner medullary collecting ducts <i>D. E. Kohan and E. Padilla</i> | F607 |
| Cyclosporin and quinidine inhibition of renal digoxin excretion: evidence for luminal secretion of digoxin <i>I. A. M. de Lannoy, G. Koren, J. Klein, J. Charuk, and M. Silverman</i> | F613 |

| | |
|---|------|
| Effect of vasoactive agents on induction of <i>Egr-1</i> in rat mesangial cells: correlation with mitogenicity <i>H. D. Rupperecht, P. Dann, V. P. Sukhatme, R. B. Sterzel, and D. L. Coleman</i> | F623 |
| Toxicity of tubule fluid iron in the nephrotic syndrome <i>A. C. Alfrey</i> | F637 |
| Reversal of Na ⁺ retention in chronic caval dogs by verapamil: contribution of medullary circulation <i>S.-Y. Chou, I. Reiser, and J. G. Porush</i> | F642 |
| Diabetic rat glomerular mesangial cells display normal inositol trisphosphate and calcium release <i>R. D. Hurst, C. I. Whiteside, and J. C. Thompson</i> | F649 |
| Involvement and source of calcium in volume regulatory decrease of collapsed proximal convoluted tubule <i>S. Breton, J. S. Beck, J. Cardinal, G. Giebisch, and R. Laprade</i> | F656 |
| Inhibition of renin secretion from rat renal cortical slices by (R)-12-HETE <i>W. L. Henrich, J. R. Falck, and W. B. Campbell</i> | F665 |
| Fetal-maternal fluid and electrolyte relations during chronic fetal urine loss in sheep <i>M. E. Wlodek, R. Harding, and G. D. Thorburn</i> | F671 |
| Identification and localization of renal Na ⁺ -Ca ²⁺ exchanger by polymerase chain reaction <i>A. S. L. Yu, S. C. Hebert, S.-L. Lee, B. M. Brenner, and J. Lytton</i> | F680 |
| Actions of lipoproteins in cultured human mesangial cells: modulation by mitogenic vasoconstrictors <i>E. F. Gröne, H. E. Abboud, M. Höhne, A. K. Walli, H.-J. Gröne, D. Stüker, H. Robenek, E. Wieland, and D. Seidel</i> | F686 |
| Altered synthesis of proteoglycans by cyst-derived cells from autosomal-dominant polycystic kidneys <i>Z. Z. Liu, F. A. Carone, S. Nakumara, and Y. S. Kanwar</i> | F697 |
| Vasopressin resistance in potassium depletion: role of Na-K pump <i>S. K. Mujais, Y. Chen, and N. A. Nora</i> | F705 |
| Adriamycin nephropathy: a model to study effects of pregnancy on renal disease in rats <i>E. Podjarny, J. Bernheim, M. Rathaus, A. Pomeranz, D. Tovbin, J. Shapira, and J. Bernheim</i> | F711 |
| Intracellular pH regulation in cultured renal proximal tubule cells in different stages of maturation <i>H. Ekblad, A. Aperia, and S. H. Larsson</i> | F716 |
| Effect of changes in extracellular potassium on intracellular pH in principal cells of frog skin <i>V. Lyall, T. S. Belcher, and T. U. L. Biber</i> | F722 |
| Distribution and content of renin and renin mRNA in remnant kidney of adult rat <i>C. Pupilli, R. L. Chevalier, R. M. Carey, and R. A. Gomez</i> | F731 |
| Ouabainlike factor in Milan hypertensive rats <i>M. Ferrandi, E. Minotti, S. Salaria, M. Florio, G. Bianchi, and P. Ferrari</i> | F739 |
| Adaptation of rabbit cortical collecting duct to in vitro acid incubation <i>K. Yasoshima, L. M. Satlin, and G. J. Schwartz</i> | F749 |
| ANNOUNCEMENTS | F757 |

No. 5. NOVEMBER 1992

EDITORIAL REVIEW

| | |
|---|------|
| Protective and specificity-conferring mechanisms of mineralocorticoid action <i>D. J. Morris and G. W. Souness</i> | F759 |
| Induction and intracellular localization of HSP-72 after renal ischemia <i>S. K. Van Why, F. Hildebrandt, T. Ardito, A. S. Mann, N. J. Siegel, and M. Kashgarian</i> | F769 |

| | |
|--|------|
| Macrophages mediate adverse effects of cholesterol feeding in experimental nephrosis <i>I. Pesek-Diamond, G. Ding, J. Frye, and J. R. Diamond</i> | F776 |
| Chloride transport in a mathematical model of the rat proximal tubule <i>A. M. Weinstein</i> | F784 |
| Rat kidney aldose reductase and aldehyde reductase and polyol production in rat kidney <i>S. Sato</i> | F799 |
| Epidermal growth factor accelerates renal tissue repair in a model of gentamicin nephrotoxicity in rats <i>N. J. Morin, G. Laurent, D. Nonclercq, G. Toubeau, J.-A. Heuson-Stiennon, M. G. Bergeron, and D. Beauchamp</i> | F806 |
| Erythropoietin metabolism and pharmacokinetics in experimental nephrosis <i>X.-J. Zhou and N. D. Vaziri</i> | F812 |
| Renal hemodynamic effects of exogenously administered adenosine and polyadenylic acid <i>C. I. Thompson and W. S. Spielman</i> | F816 |
| Mechanism of PGE ₂ -induced cell swelling in distal nephron segments <i>T. Shimizu, M. Naruse, M. Takeda, M. Nakamura, K. Yoshitomi, and M. Imai</i> | F824 |
| Immunocytochemical characterization of Na ⁺ -H ⁺ exchanger isoform NHE-1 in rabbit kidney <i>D. Biemesderfer, R. F. Reilly, M. Exner, P. Igarashi, and P. S. Aronson</i> | F833 |
| Folate transport and binding by cultured human proximal tubule cells <i>K. E. McMartin, K. M. Morshed, D. J. Hazen-Martin, and D. A. Sens</i> | F841 |
| Rubidium absorption and proton secretion by rabbit outer medullary collecting duct via H-K-ATPase <i>C. S. Wingo and F. E. Armitage</i> | F849 |
| Enalaprilat handling by the kidney: barrier-limited cell entry <i>A. J. Schwab, I. A. M. de Lannoy, C. A. Goresky, K. Poon, and K. S. Pang</i> | F858 |
| Interaction of Cl ⁻ and other halogens with Cl ⁻ transport systems in rabbit cortical collecting duct <i>S. Muto, M. Imai, and Y. Asano</i> | F870 |
| Localization of urea and ornithine production along mouse and rabbit nephrons: functional significance <i>O. Levillain, A. Hus-Citharel, F. Morel, and L. Bankir</i> | F878 |
| Effects of ATP on pre- and postglomerular juxtamedullary microvasculature <i>E. W. Inscho, K. Ohishi, and L. G. Navar</i> | F886 |
| Comparative sensitivities of isolated rat renal arterioles to endothelin <i>D. M. Lanese, B. H. Yuan, I. F. McMurtry, and J. D. Conger</i> | F894 |
| EDRF-angiotensin II interactions in rat juxtamedullary afferent and efferent arterioles <i>K. Ohishi, P. K. Carmines, E. W. Inscho, and L. G. Navar</i> | F900 |
| Arginine augments neither albuminuria nor albumin synthesis caused by high-protein diets in nephrosis <i>G. A. Kaysen, V. I. Martin, and H. Jones, Jr.</i> | F907 |
| Modulation of tumor necrosis factor-induced increase in renal (LLC-PK ₁) transepithelial permeability <i>J. M. Mullin, K. V. Laughlin, C. W. Marano, L. M. Russo, and A. P. Soler</i> | F915 |
| Renal innervation plays no role in oxygen-dependent control of erythropoietin mRNA levels <i>K.-U. Eckardt, M. LeHir, C. C. Tan, P. J. Ratcliffe, B. Kaissling, and A. Kurtz</i> | F925 |
| Effects of angiotensin II on proximal tubular cells stably transfected with the c-mas oncogene <i>G. Wolf and E. G. Neilson</i> | F931 |
| Estimation of erythropoietin secretion rate in normal and uremic subjects <i>G. A. Coles, T. Liberek, M. E. Davies, M. Robinson, J. Jones, G. Thomas, M. Davies, I. C. Macdougall, and J. D. Williams</i> | F939 |
| Na ⁺ -Ca ²⁺ exchanger of rat proximal tubule: gene expression and subcellular localization <i>J. H. Dominguez, M. Juhaszova, S. B. Kleiboeker, C. C. Hale, and H. A. Feister</i> | F945 |
| Age-related changes in α_1 - and α_2 -chain type IV collagen mRNAs in adult mouse glomeruli: competitive PCR <i>E. P. Peten, A. Garcia-Perez, Y. Terada, D. Woodrow, B. M. Martin, G. E. Striker, and L. J. Striker</i> | F951 |

- A study of regional distribution of renal blood flow using quantitative autoradiography
*J. G. Geraghty, M. Nsubuga, W. J. Angerson, N. N. Williams, A. A. Sarazen,
 P. A. Dervan, and J. M. Fitzpatrick* F958

MODELING IN PHYSIOLOGY

- Organ perfusion by dynamic scintigraphy convection-diffusion tracer kinetics
 in a phantom
*L. S. Kegeles, P. Stritzke, S. Kupfer, S. Vallabhajosula, L. Burrows,
 H. Schanzer, and S. J. Goldsmith* F963

RAPID COMMUNICATIONS

- Renal expression of the gene for atrial natriuretic factor
J. E. Greenwald, D. Ritter, E. Tetens, and P. S. Rotwein F974
- Cl⁻ channels in basolateral renal medullary membranes. VI. Cl⁻ conductance expression
 in *Xenopus* oocytes
L. Zimniak, W. B. Reeves, and T. E. Andreoli F979

No. 6. DECEMBER 1992

EDITORIAL REVIEW

- Hormone signaling systems in inner medullary collecting ducts
I. Teitelbaum F985
-
- Adenosine receptor gene expression in rat kidney
D. R. Weaver and S. M. Reppert F991
- Characterization of acid-base transporters in cultured outer medullary
 collecting duct cells
T. M. Manger and B. M. Koeppen F996
- Electrophysiological properties of cultured outer medullary collecting duct cells
C. A. Pappas and B. M. Koeppen F1004
- β -Adrenergic regulation of H⁺ secretion by cultured outer medullary collecting duct cells
T. M. Manger, C. A. Pappas, and B. M. Koeppen F1011
- Activation of endothelin ET_B receptors increases glomerular cGMP via
 an L-arginine-dependent pathway
R. M. Edwards, M. Pullen, and P. Nambi F1020
- Vasomotor effects of purinergic agonists in isolated rabbit afferent arterioles
H. Weihprecht, J. N. Lorenz, J. P. Briggs, and J. Schnermann F1026
- Extent and course of glomerular injury in human membranous glomerulopathy
A. Guasch, R. K. Sibley, P. Huie, and B. D. Myers F1034
- Control of renal hemodynamics after protein feeding: role of calcium channels
L. L. Woods, B. E. Smith, and D. R. De Young F1044
- Effect of high-protein diet on renal concentration capacity in rabbits
J. E. Benabe and H. R. Cordova F1051
- Prostaglandins do not mediate impaired autoregulation or increased renin secretion
 in remnant rat kidneys
K. A. Griffin, A. K. Bidani, M. Picken, V. R. Ellis, and P. C. Churchill F1057
- A mathematical model of the rabbit cortical collecting tubule
J. Strieter, J. L. Stephenson, G. Giebisch, and A. M. Weinstein F1063
- Regulation of K transport in a mathematical model of the cortical collecting tubule
J. Strieter, A. M. Weinstein, G. Giebisch, and J. L. Stephenson F1076
- Expression of mRNA (D2) encoding a protein involved in amino acid transport
 in S3 proximal tubule
Y. Kanai, M. G. Stelzner, W.-S. Lee, R. G. Wells, D. Brown, and M. A. Hediger F1087
- DOCA-enhanced sites of vasopressin-stimulated cAMP formation in rat
 cortical collecting tubule
S. McArdle, R. Fallet, W. B. Jeffries, and W. A. Pettinger F1093

| | |
|--|-------|
| Rapid renal potassium adaptation in rats C. A. Jackson | F1098 |
| Renal dopamine receptors and pre- and post-cAMP-mediated Na ⁺ transport defect in spontaneously hypertensive rats A. Horiuchi, F. E. Albrecht, G. M. Eisner, P. A. Jose, and R. A. Felder | F1105 |
| Role of plasmin and gelatinase in extracellular matrix degradation by cultured rat mesangial cells A. P. Wong, S. L. Cortez, and W. H. Baricos | F1112 |
| Cellular morphology in outer medullary collecting duct: effect of 75% nephrectomy and K ⁺ depletion R. K. Zalups and D. A. Henderson | F1119 |
| A micropuncture study of renal lithium reabsorption: effects of amiloride and furosemide D. G. Shirley, S. J. Walter, and B. Sampson | F1128 |
| Mechanisms of rubidium permeation by rabbit cortical collecting duct during potassium restriction X. Zhou and C. S. Wingo | F1134 |
| <hr/> | |
| Subject Index to Volume 32 | F1143 |
| Author Index to Volume 32 | F1151 |

CORRIGENDA

Volume 262, March 1992
Volume 31, March 1992

Pages F449–F453: E. Dafnis, M. Spohn, B. Lonis, N. A. Kurtzman, and S. Sabatini. "Vanadate causes hypokalemic distal renal tubular acidosis." The value for urine anion gap in NH₄Cl-treated animals on page F450 (last sentence in first paragraph of RESULTS), as well as on page F451 (Table 2, last value in last line), should be -82 ± 7 meq/l instead of -232 ± 27 meq/l.

Pages F468–F479: F. N. Ziyadeh, J. W. Mills, and A. Kleinzeller. "Hypotonicity and cell volume regulation in shark rectal gland: role of organic osmolytes and F-actin." Page F471: in Table 1, the units for ⁸⁶Rb⁺ uptake should be mmol·kg dry wt⁻¹·min⁻¹, as mentioned in MATERIALS AND METHOD (*Uptake studies*).

Volume 262, May 1992
Volume 31, May 1992

Pages F837–F842: E. Imesch, M. Moosmayer, and B. M. Anner. "Mercury weakens membrane anchoring of Na-K-ATPase." Page F839: a line of type was inadvertently dropped from the legend to Fig. 3; it should read as follows: Enhanced trypsinolysis of Na-K-ATPase α -subunit pretreated by mercury at 1 mg protein/ml. Na-K-ATPase (10 μ g protein/10 μ l) was incubated either in a solution stabilizing the E₁ conformation [A: containing (in mM) 50 NaCl, 50 KCl, 5 MgCl₂, 5 ATP, 30 histidine, and 1 Tris-EDTA, pH 7.2] or in a solution stabilizing the E₂ conformation (B: 100 mM KCl, 5 mM MgCl₂, 30 mM histidine, 1 mM Tris-EDTA, pH 7.2, for 30 min at 37°C) with HgCl₂ concentrations ranging from 10 nM to 100 μ M. Trypsinolysis (30 min at 20°C) and gel electrophoresis were performed as described in EXPERIMENTAL PROCEDURES.

Advances in Physiology Education

No. 1. DECEMBER 1992

EDITORIAL

Looking forward to change

P. A. Hansen

S1

A faculty research and training program for undergraduates in the sciences

W. C. Randall and S. L. Burden

S3

Sensory adaptation: extracellular recording from locust wing hinge stretch receptor

R. M. Robertson

S7

Teaching medical physiology in Brazil

A. B. Bartoszeck

S12

Electroencephalography and evoked potentials: a PC-based analysis program
for laboratory courses in physiology

M. Illert, H. Wiese, and U. Wolfram

S16

The use of Apple Macintosh computers and Hypercard
in teaching physiology laboratories

P. J. Stephens and J. A. Doherty

S23

Project labs in physiology

A. P. Woodhull-McNeal

S29

The Predictions Table: a tool for assessing students' knowledge

A. A. Rovick and J. A. Michael

S33

Use of computer-assisted courseware in teaching neuroscience: the Graphic Brain

T. J. Teyler and T. J. Voneida

S37

Complex medical case histories as portals to medical practice
and integrative, scientific thought

J. Engelberg

S45

